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COAST AND GEODETIC SURVEY

O. H. TITTMANN
SUPERINTENDENT

BOUND JUL 19 1911

TIDE TABLES

FOR THE YEAR 1912

PRICE 50 CENTS

WASHINGTON
GOVERNMENT PRINTING OFFICE
1911

mag der Jurist eine so subtile Unterscheidung machen wie er will (dieser Unterschied ist wirklich sehr schwer zu verteidigen, weil der Kollektivvertrag für den individuellen Arbeitsvertrag Bedingungen vorschreibt, die theoretisch wenigstens frei bleiben), seine Stellungnahme, wie auch diejenige seiner Partei, bedeutet immerhin einen großen Erfolg der Gewerkschafter.

Man muß nämlich zugeben, daß der Widerstand der Interessierten, wenigstens zur Zeit, als der Gesetzentwurf vorgelegt wurde, ein sehr heftiger gewesen ist. Die Vertreter der Arbeitgeberverbände, besonders einige Präsidenten von Handelskammern, haben sehr lebhaft dagegen protestiert. „Wenn", so sagte einer von ihnen, „das Gesetz den Kollektivvertrag bestätigt haben wird, wird die Gewerkschaft sich jederzeit zwischen Arbeiter und Arbeitgeber stellen wollen. Die Arbeitgeber haben dann nur zwischen Kollektivvertrag und Streik zu wählen."

Aber auch die Arbeiter widersetzten sich der Annahme des Gesetzentwurfes, wenn auch aus anderen Gründen. Im Jahre 1906, auf dem Kongreß zu Amiens, und 1910 auf dem Kongreß zu Toulouse hat die Confédération Générale du Travaille (Gewerkschaftscentrale) gegen den Entwurf Stellung genommen. „Da der Kollektivvertrag", wie Merrheim erklärte, „nur durch die Gewerkschaft erlangt werden kann, würde daraus die obligatorische Gewerkschaft entstehen." Und er fügte hinzu: „Wenn es einen obligatorischen Verband geben soll, so darf das nur das Ergebnis des gewerkschaftlichen Kampfes sein. Ist es aber wohl ratsam, dem Gesetze indirekt die Wege für die Entwickelung zu dieser Verpflichtung zu ebnen?" Er befürchtete, daß der Staat mittels eines solchen Gesetzes von neuem versuchen würde, das Streikrecht oder das Koalitionsrecht zu erdrücken.

Auf dem Kongreß zu Toulouse hat Renard, der Sekretär des Textilarbeiterverbandes, gegen die gleichen Einwendungen den Kollektivvertrag verteidigen müssen. Er sah daran „ein in die Gewerkschaft verpflanztes konstitutionelles Regime, wodurch die Arbeiter in die Lage kommen, mit ihren Arbeitgebern auf gleichem Fuße über die Arbeitsbedingungen zu verhandeln.".

Wahrscheinlich wird es nur kurzer Zeit bedürfen, um auch den revolutionärsten Arbeitern klarzumachen, daß das neue Gesetz nicht auf eine Einmischung des Staates in die Beziehungen zwischen Arbeitgeber und Arbeiter angelegt ist, sondern daß es im Gegenteil sichere Garantien für die Tätigkeit der Arbeiterbewegung bietet.

Uebrigens hat der Referent in diesem Sinne den primitiven Text der Regierung geändert und so den Entwurf vor der Kammer verteidigt. Wie er so ausgezeichnet sagte: „Das Gesetz wäre schädlich, wenn es den kollektiven Arbeitsvertrag reformieren oder lähmen wollte, es wird jedoch nützlich wirken, wenn es diesen neuen Rechten, die die alten Rahmen zu brechen drohen, den Weg bereitet. Das Gesetz soll weder eine Beschleunigung noch eine Verzögerung des Vertragswesens bezwecken."

Schließlich hat Groussier ganz vorzüglich die Wichtigkeit des Kollektivvertrages für die Zukunft des Proletariats klargelegt. Mögen die Institutionen, die dieses neue Gesetz erheischt, sein wie sie wollen, obligatorischer Verband, zwangsweises Schiedsgericht usw., eines ist sicher, daß man nach einer Organisation des Berufes trachten und daß der Kollektivvertrag eines Tages für den ganzen Beruf einheitliche Arbeitsbedingungen schaffen wird. Der Kollektivvertrag will die Arbeitsbedingungen des ganzen Berufes regeln, er will feste Normen, ein Berufsgesetz schaffen.

Durch diese Regelung wird sofort die alte Werkstattsordnung ersetzt, die nach der Willkür des Arbeitgebers geschaffen wird und deren Einhaltung der Code Civil dem durch Einzelvertrag verpflichteten Arbeiter, der durch Unterschrift des Kontraktes sich auch hiermit einverstanden erklärt hatte, zur strengen Pflicht machte.

Später kann der Kollektivvertrag all die allgemeinen Arbeitsbedingungen umfassen, die heute durch das Gesetz festgelegt werden. Das Gesetz über den wöchentlichen Ruhetag z. B. ist heutzutage in Frankreich so schlecht durchgeführt, weil einerseits die rigorosen Bestimmungen des Gesetzes sehr schwer anwendbar sind und weil andererseits, wenn man sich auf schwache oder Scheinorganisationen verläßt, die Abkommen von neuem zur Ausbeutung des Arbeiters führen können; später werden verallgemeinerte Kollektivverträge dem Gesetze eine größere Geschmeidigkeit gestatten und dadurch eine größere Wirksamkeit verleihen. Wenn die Kollektivverträge erst einmal in der neuen gesetzlichen Form eingeführt sind, werden die Arbeiter ebenso sichere und noch sicherere Garantien haben, als diejenigen, die heute für sie von der Gesetzgebung verlangt werden müssen.

Endlich und ganz besonders bestätigt der Kollektivvertrag den neuen Erfolg der Arbeiteremanzipation. Künftig werden, dank dem Koalitionsrecht, die Arbeiter mit ihren Arbeitgebern diskutieren, um gemeinsam die Vorschriften für die einen wie für die anderen festzusetzen. Und nichts kann besser dartun, bis zu welchem Grade die Knechtschaft des Arbeiters gemindert wird, als diese erste Vorbedingung durch ein Gesetz legalisieren zu lassen.

Wenn es wahr ist, daß die französische Gesetzgebung oft das Verdienst hat, Grundsätze, die in anderen Ländern schon mehr verwirklicht worden sind, zum Gesetz zu erheben, so wird diese Tatsache noch einmal bewahrheitet.

Die großen deutschen oder englischen Organisationen haben sicherlich eine viel ausgedehntere Praxis des Kollektivvertrages als Frankreich. Aber, soviel ich weiß, wurde noch in keinem anderen Lande dieser Fortschritt durch das Gesetz bestätigt.

Paris. Albert Thomas.

Arbeiterbewegung.

Aus den deutschen Gewerkschaften.

Zum Tode Bebels haben bisher nur einige Gewerkschaftsblätter Nachrufe bringen können, da bei den meisten Redaktionsschluß eingetreten war, als die Trauerbotschaft eintraf. Von den vorliegenden Nachrufen geben wir hier einige kurze Auszüge:

„Bergarbeiterzeitung":

Auch den Gewerkschaften war Bebel allezeit ein warmer Freund und eifriger Förderer, der immer und eindringlich die Einigkeit aller Berufskameraden empfahl, ohne Unterschied der konfessionellen und parteipolitischen Gesinnung, weil er in der absoluten Einigkeit aller Arbeiter eines Berufes die beste Gewähr für gewerkschaftliche Erfolge sah.

„Korrespondent für Deutschlands Buchdrucker":

Bebel ist von jeher ein entschiedener Befürworter einer Form der Gewerkschaften gewesen, wie wir sie nun zum Glück in Deutschland haben. Die Einheitlichkeit wie die Neutralität der Gewerkschaftsbewegung wurde zwar

schon auf dem Eisenacher Kongresse 1869 als Notwendigkeit anerkannt. 1872 ward auf dem Erfurter Gewerkschaftskongresse dieses Erfordernis abermals betont, aber noch im Jahre 1900 fand sich Bebel veranlaßt, für die Selbständigkeit und Neutralität der Gewerkschaften mit Energie einzutreten. Sein damaliger Vortrag über die „Gewerkschaftsbewegung und die politischen Parteien" erschien als Broschüre und hat zur endlichen Klärung in dieser Frage viel beigetragen. Daß Bebel trotzdem 1893 auf dem Kölner Parteitag einen großen Pessimismus über die Gewerkschaftsbewegung bekundete, erklärt sich aus den Zeitverhältnissen, denn die wirtschaftlichen Organisationen der Arbeiter lagen durch das Sozialistengesetz niedergerungen noch am Boden.

Den Buchdruckern war Bebel schon in frühester Zeit zugeneigt. Im Leipziger Fortbildungsvereine war er ein sehr beliebter Vortragender und auch sonst bei den Leipziger Kollegen ein immer willkommener Gast.

„Solidarität" (Buchdruckereihilfsarbeiter):

Bebels ungestümes, vorwärtsdrängendes Temperament, seine hinreißende Rednergabe, sein unermüdliches Wirken und Kämpfen für die politischen und wirtschaftlichen Forderungen der Arbeiterklasse, hat ihn zum Führer der Massen gemacht, die mit Vertrauen und Verehrung zu ihm aufblickten. Nichts war imstande, ihn von seinen Zielen und Idealen abzubringen; weder die Verfolgungen seiner Gegner noch die schwersten Schicksalsschläge, die ihm auf seinem Lebenswege nicht erspart blieben, konnten diesen Feuergeist niederringen.

Der „Proletarier" (Fabrikarbeiter):

Die deutschen Gewerkschaften verdanken Bebel sehr viel. Er hat nicht nur mit ihnen gekämpft gegen das Unternehmertum und die Regierung, er hat auch für sie gestritten in den eigenen Reihen. Als noch mancher Parteiführer den organisatorischen Nebenbuhler voll Mißtrauen wachsen sah, trat Bebel schon energisch und erfolgreich für die Gewerkschaften ein. . . . .

Nicht nur die Bedeutung der Gewerkschaften erkannte Bebel schon frühzeitig, sondern auch die Notwendigkeit ihrer geistigen Selbständigkeit. Er ist wiederholt den Parteigenossen entgegengetreten, die aus den Gewerkschaften „Rekrutenschulen" der sozialdemokratischen Partei machen wollten. . . . .

Diese Stellung zu den Gewerkschaften erklärt es auch, daß Bebel wiederholt in schwierigen Situationen zu Rate gezogen wurde. Als im Jahre 1907 die Berliner Maurer allem Abraten der Organisation zum Trotz in den Kampf treten wollten, ersuchte der Verband Bebel, seinen Einfluß bei der Arbeiterschaft aufzubieten, um den Kampf zu verhindern. Und Bebel kam. Mit eindringlichen Worten riet er den Arbeitern dem Rat der Organisationsleitung zu folgen. Leider vergeblich. Der Kampf wurde begonnen und verloren. Als drei Jahre später die große Aussperrung im Baugewerbe mit einem Siege der Arbeiterschaft geendet hatte, da war es wieder Bebel, der die Unbefriedigten und Murrenden in einem glänzend geschriebenen Artikel ermahnte, den Sieg zu schätzen. So war Bebel immer bereit zu helfen und zu raten, wo seine Hilfe und sein Rat begehrt wurde.

„Handlungsgehilfenzeitung":

Ehe daran zu denken war, daß die Handlungsgehilfen eine lebhafte sozialpolitische Agitation entfalten würden, da hatte Bebel längst die Notwendigkeit erkannt, daß der Staat die wirtschaftlich Schwachen, die Angestellten und Arbeiter, stützen müsse gegen die Uebermacht und die Willkür des Unternehmertums. Diesem Ziele hat er viele Mühe gewidmet. Die Protokolle und Drucksachen des Reichstags sind sprechende Beweise. Zehn Jahre bevor die staatlichen Versicherungsgesetze auftauchten, sprach Bebel in der Reichstagssitzung vom 8. Mai 1871 aus, der Staat müsse den Grundsatz anerkennen, daß der Unternehmer, der aus der fremden Arbeitskraft Gewinn zieht, verpflichtet sei, dem Arbeiter für die Beeinträchtigung der Arbeitskraft durch Unfälle vollen Schadenersatz zu gewähren. Der Gesetzgeber hat diesem Gedanken zum Teil Rechnung getragen; indem er die Versicherungsgesetze schuf, zu denen die Unternehmer beitragspflichtig sind.

„Deutscher Maschinist und Heizer":

Dieser starke Wille, diese beredte Ueberzeugung, diese uneigennützige Aufopferung riß Tausende, Hunderttausende, Millionen mit sich fort, begeisterte zum ununterbrochenen Befreiungskampfe. In dem Träger dieser vorbildlichen Willenskraft und Opferfreudigkeit, in unserem unvergeßlichen August Bebel sehen die Feinde, die Gewaltmenschen der heutigen herrschenden Gesellschaft mit Recht den treibenden Geist... 56 Monate verbrachte August Bebel, der Tapfere, in Festungs- und Gefängnishaft, ein ungebrochener Kämpfer stellte er sich immer wieder in den Dienst der heiligen Sache des Proletariats, der er durch den Sozialismus zum Siege verhelfen wollte. Und seine Arbeit und seine Opfer sind nicht umsonst gewesen: es wuchs die Zahl der überzeugten Kämpfer von Tag zu Tag, von Jahr zu Jahr, der Sozialismus eroberte die Köpfe vieler Millionen Menschen, die Werbekraft und die Organisation wurden sieghafte Mächte im wirtschaftlichen, sozialen und politischen Leben. Nicht, daß das ausschließlich Bebels Werk wäre. Aber seine rastlose Arbeit und unerschütterliche Ueberzeugung, sein leuchtendes Vorbild und sein Idealismus ließen die ungezählten Tausende von Kämpfern zu ihm aufschauen in dem gläubigen Verlangen, mit ihm von Kampf zu Kampf und Sieg zu Sieg zu schreiten.

„Der Steinarbeiter":

Für die Ausbreitung der Gewerkschaften trat der Verstorbene jederzeit in recht lebhafter Weise ein. Mit großer Ueberzeugung machte er in den ungezählten Versammlungen, welche er abhielt, die Arbeiter auf den eminenten wirtschaftlichen und kulturellen Wert der Gewerkschaften aufmerksam. Viele Tausende von Indifferenten haben nach seinen begeisternden Worten von der politischen Volksversammlung weg den Weg zur gewerkschaftlichen Organisation gefunden. Durch seine Reichstagsreden, besonders über die Kapitel Sozialpolitik, Klassenjustiz, Unternehmerterrorismus, welche in ihrer reichen Detaillierung den ehemaligen Arbeiter mühelos erkennen ließen, hat er der gewerkschaftlichen Bewegung und Entwickelung unschätzbare Dienste geleistet. Bebel hat allerdings auf dem Parteitag zu Köln Mitte der neunziger Jahre des vorigen Jahrhunderts der Meinung Ausdruck gegeben, daß in Deutschland der Ausbreitung der Gewerkschaftsbewegung durch die rapide Entwickelung des Kapitalismus und die Konzentrationsbestrebung desselben große Hindernisse, die kaum zu überwinden sein würden, in den Weg gelegt seien. Diese Bedenken wurden durch die unermüdliche Agitationsarbeit zerstreut, und Bebel hat oft seine Bewunderung ausgesprochen, daß die Gewerkschaften zu einem Zweieinhalb-Millionen-Heer angewachsen sind. In literarischer Beziehung hat er ebenfalls für unsere Sache sehr viel getan. Großes Aufsehen erregte vor zirka zwanzig Jahren seine Broschüre über die tieftraurigen, allem hohnsprechenden Zustände in den Bäckereien. Die öffentliche Meinung wurde durch seine Untersuchungen aufgepeitscht und weit hinein in die bürgerlichen Kreise drang die Entrüstung über das von Bebel zutage Geförderte. Die deutschen Bäckereiarbeiter, die damals in organisatorischer Beziehung noch recht schwach waren, werden es niemals vergessen, daß sie durch seine Anklageschrift zu einer gesetzlichen Regelung der Maximalarbeitszeit, der Ruhepausen usw. gekommen sind. Die

baugewerblichen Organisationen legten auf Bebels Rat in kritischen Zeiten besonders großen Wert. Als 1907 die Berliner Maurer trotz der ungünstigen Konjunktur in den Streik treten wollten, warnte er in eindringlicher Weise vor einem solchen Beschluß. Seine Rede wies eine solche Fülle von praktischen Gedanken auf, daß man zu der Meinung kommen mußte, er hätte überhaupt irgendeiner Berufsorganisation einige Jahrzehnte als Leiter vorgestanden. . . . . In seiner Rede aber führte Bebel treffend aus, daß die Führer den Mut haben müssen, jederzeit, wenn es die Situation erheischt, auch gegen den Willen der Massen aufzutreten. Ein schlechter General, meinte er, sei derjenige, der nicht den Mut hätte, auf Grund seiner Erfahrungen in gewerkschaftlichen Dingen gegen den Streikbeschluß, weil die wirtschaftlichen Verhältnisse ungünstig sind, aufzutreten.

*

Das Organ des Verbandes der Asphalteure, „Der Asphaltarbeiter", konnte am 15. August sein zehnjähriges Jubiläum feiern. In einem längeren Aufsatze der Jubiläumsnummer wird das Wirken des Verbandes und seines Organs gewürdigt und der Schwierigkeiten gedacht, die der Organisationstätigkeit entgegenstanden.

Der Abrechnung des Dachdeckerverbandes für das 2. Quartal ist zu entnehmen, daß die Einnahmen 38 175 Mk., die Ausgaben 50 453 Mark und der Kassenbestand am 1. Juli 125 286 Mk. betrugen. Von den Ausgaben entfielen auf Maßregelungen und Streiks 25 106 Mk.

Der Friseurgehilfenverband zählte am Schlusse des 2. Quartals 2539 Mitglieder gegen 2480 im vorhergehenden Quartal. Für Erwerbslosenunterstützung wurden 1342 Mk. verausgabt. Das Verbandsvermögen betrug 21 468 Mk., davon in den Lokalkassen 8950 Mk.

An der Arbeitslosenstatistik des Holzarbeiterverbandes beteiligten sich im Monat Juli 845 Zahlstellen mit 190 703 Mitgliedern. Die Gesamtzahl der Arbeitslosen betrug 19 610, davon am letzten Tage des Monats 8978 arbeitslose Mitglieder. Auf je 100 Mitglieder entfielen 4,71 Arbeitslose gegen 4,95 im Vormonat und 2,04 im Juli 1912. Für Arbeitslosenunterstützung wurden 188 949 Mk. an 8510 Mitglieder für 104 963 Tage verausgabt. Die Reiseunterstützung erforderte eine Ausgabe von 19 020 Mk. an 14 058 Mitglieder.

Der Verband der Schneider veranstaltet kommenden Herbst im ganzen Reiche Agitationsversammlungen, in denen die Lohn- und Tarifpolitik im Schneidergewerbe erörtert werden soll. Den Versammlungen soll eine Hausagitation mit Flugblattverbreitung vorausgehen.

Zur Entwickelung der Gewerkschaftsbewegung im Herzogtum Gotha.

Der im Juni erschienene Bericht für das Geschäftsjahr 1912 des Arbeitersekretariats Gotha zeigt eine günstige Aufwärtsbewegung. (Die Buchdrucker in der Stadt Gotha haben sich leider dem Gewerkschaftskartell nicht angeschlossen und werden demzufolge nicht mitgezählt.) Die Gewerkschaftskartelle zahlten 3600 Mk. an das Sekretariat, 1900 Mark allein das Gothaer. In der Stadt Gotha bestanden 29 Verbands-Zahlstellen mit 3586 männlichen und 98 weiblichen Mitgliedern, davon waren an 5734 Tagen 426 arbeitslos. Es wurden von 28 Gewerkschaften folgende Unterstützungen gezahlt: an Arbeitslosenunterstützung 4357,46 Mk., Krankenunterstützung 15 294,19 Mk. (803 Personen für 13 476 Tage) und Reiseunterstützung 2417,37 Mk. An das Gewerkschaftskartell zahlten diese Gewerkschaften (von den 95 000 Mk. vereinnahmten Geldern) 4469,52 Mark. Die Abrechnung des Kartells bilanziert mit 5688,29 Mk. und weist 1500 Mk. Kapital nach. Die Sekretariatsabrechnung weist rund 10 000 Mk. Kapital nach bei einer Bilanz von 12 739,03 Mk. Die Einnahme und Ausgabe des Kassenberichts der Bibliothekenkommission schließt ab mit 543,97 Mk. Die Bibliothek war an 240 Stunden geöffnet. An 447 Leser wurden 4467 Bücher ausgeliehen, bei einem Bücherbestand von 2306. Der Bericht des Arbeitersekretärs besagt u. a.: Im Jahre 1912 haben 4917 Personen (1911: 4848) das Sekretariat in Anspruch genommen, an welche 4943 Auskünfte erteilt wurden. 4393 Personen waren männliche und 524 weibliche. 4412 Auskünfte wurden mündlich, 531 Auskünfte schriftlich erteilt. — Briefe sind eingelaufen 587, ausgelaufen 1106, im ganzen sind 1747 Schriftsätze angefertigt. In letzter Zahl sind die bei Klagen, Berufungen zum Schiedsgericht, Rekursen usw. doppelt und dreifach einzureichenden Schriftsätze nicht eingerechnet, sonst würde die Zahl der tatsächlich angefertigten Schriftsätze sich auf 2311 belaufen. Von den angefertigten Schriftsätzen bezogen sich auf Arbeiterversicherung 649, Arbeits- und Dienstvertrag 87, Bürgerliches Recht 198, Strafrecht 19, Gemeinde- und Staatsangelegenheiten 634, sonstige Sachen 160. Von den 649 Schriftsätzen der Arbeiterversicherung bezogen sich 473 auf Unfall-, 99 auf Invaliden- und 77 auf Krankenversicherung. — Nach Stand oder Beruf verteilen sich die Personen wie folgt: Arbeiter 3964, Aufwärterinnen 58, Beamte 9, Dienstmädchen 101, Ehefrauen 169, Fabrikanten 9, Fabrikarbeiterinnen 96, Gastwirte und Restaurateure 36, Gesindevermieterin 1, Hebammen 8, Landwirte 118, Rentiers 11, Schneiderinnen 14, selbständige Gewerbetreibende 246, Verkäuferinnen 17, Witwen 65, in Summa 4917 Personen. Organisiert waren 1821 Arbeiter, gleich 37 Prozent.

Am 19. und 20. Juli soll nun für alle im Bezirke des Gemeinschaftlichen Oberversicherungsamtes Gotha befindlichen Gewerkschaftskartelle im „Volkshaus" in Gotha eine Konferenz stattfinden. Es gehört zu dem O.V.A. das Großherzogtum Weimar sowie die Herzogtümer Koburg und Gotha. Die Konferenz soll sich beschäftigen mit: 1. Wahlen der Versicherten in der Arbeiterversicherung. Referent: Arbeitersekretär Schier-Gotha. 2. Schaffung einer ständigen Vertretung vor dem Oberversicherungsamt Gotha. Referent: Central-Arbeitersekretär Rud. Wissell-Berlin. 3. Die „Volksfürsorge". 4. Allgemeines. Die Konferenz ist von den Kartellen durch je ein bis zwei Vertreter zu beschicken, auch ist es erwünscht, daß die im Bezirk befindlichen Arbeitersekretäre vertreten sind.

Es empfiehlt sich, daß die Kartelle sich sofort mit der Angelegenheit beschäftigen, und wo keine Gewerkschaftskartelle sind, sollten die betreffenden Zahlstellen überall den Anschluß an das nächste Kartell vollziehen.

—n.

Eine Reminiszenz an den Weberputsch in der Schweiz im Jahre 1832.

Am 23. Juli waren es 80 Jahre, daß vor dem Obergericht in Zürich 33 Weber als Angeklagte standen und 31 von ihnen wegen Brandstiftung zu Gefängnisstrafen oder Zuchthausstrafen von 2 bis 24 Jahren verurteilt, aber nur 2 freigesprochen wurden. Die höchste Strafe von 24 Jahren Zuchthaus hatte der 51jährige Franz Felix Egli aus der

Gemeinde Bäretswil, Vater von 6 Kindern, als „Rädelsführer" erhalten. Der Staatsanwalt hatte gar die Todesstrafe durch das Schwert beantragt, obwohl bei dem fraglichen Brande kein Menschenleben verloren ging oder auch nur gefährdet war und obwohl viele Zeugen den Egli als geistesgestört bezeichneten. Sechs andere arme unglückliche und in einem begreiflichen Irrtum befangene Weber hatten je 18 Jahre Zuchthaus erhalten, die übrigen 24 Angeklagten Zuchthaus- oder Gefängnisstrafen bis herab zu zwei Jahren. Das Gerichtsurteil charakterisierte das Verbrechen der Hauptangeklagten als vorsätzliche Brandstiftung, durch die ein Schaden von 270 000 Frank verursacht worden sei, nicht aber als Komplott oder Aufstand und den „weitverbreiteten Irrwahn", welcher die Schuldigen beherrscht habe, führte es als Milderungsgrund an.

Um was handelte es sich in diesem bedeutungsvollen Gerichtsfalle? Um ein ergreifendes Weberdrama, das 12 Jahre später im schlesischen Weberaufstand sein geschichtliches Seitenstück erhielt.

Im Kanton Zürich waren anfangs des 19. Jahrhunderts etwa 18 000 Baumwollweber am Handwebstuhl tätig und sie schlugen sich durch die Mitarbeit von Frau und Kind sowie in Verbindung mit etwas Landwirtschaft recht und schlecht durch. Die sich immer mehr ausbreitende mechanische Weberei in England und kontinentalen Ländern machte der Handweberei zunehmende empfindliche Konkurrenz und anfangs der dreißiger Jahre war die gesamte Industrie des Kantons Zürich mit ihren mehr als 40 000 Arbeitern auch durch die Rückwirkungen der Revolutionen in Belgien und Polen in Mitleidenschaft gezogen worden. „Die polnischen Juden," sagt Theodor Curti in seiner ausgezeichneten Geschichte der Schweiz im 19. Jahrhundert, „welche den Absatz der Fabrikate nach den östlichen Ländern und Asien vermittelt hatten, fehlten jetzt auf der Leipziger Messe, was für den Kanton Zürich allein einen jährlichen Verlust von mehreren Millionen bedeutete und mit zur Erklärung dafür dient, warum man bei uns der Wiederherstellung eines unabhängigen Polen so große Bedeutung beimaß; als russische Provinz befürchteten die Industriellen, würde Polen für den schweizerischen Handel verloren sein." Diese Feststellung des innigen Zusammenhangs von wirtschaftlichen Interessen und revolutionärer Sympathie der schweizerischen Kapitalistenklasse hat geradezu pikanten historischen Reiz. Indes ist die heutige schweizerische Kapitalistenklasse nicht anders geartet. Sie würde sich selbst mit der sozialistischen Organisation Deutschlands ganz ruhig abfinden, wenn sie mit ihr gute Geschäfte machen könnte und keine unmittelbare Gefahr für die Sozialisierung der Schweiz bestände.

Es war also eine Wirtschaftskrise eingetreten, die auch die Weber empfindlich traf. Curti berichtet über ihre Verdienstverhältnisse, daß die tüchtigsten Weber im Jahre 1830 mit der Herstellung von zwei Stücken Calicots — „Gallistückli" — 1 Gulden sechs Kreuzer wöchentlich verdienten; die weniger tüchtigen 30 bis 33 Kreuzer und die zahlreichste Klasse der Schwächern, worunter sich die meisten Minderjährigen befanden, höchstens 19 Kreuzer, wenn ihre Auslagen für Schlichte und Oel abgerechnet waren.

Das waren elende Verhältnisse, unter denen die Weberbevölkerung schwer litt und mit denen sie sehr unzufrieden war. Und dazu drohte die Einführung der Webmaschine, welche Gefahr die Stimmung der Weber noch erbitterter machte. Sie hatten die Einführung der Spinnmaschine, die Vernichtung der Handspinnerei und das Elend der Handspinner erlebt und sie befürchteten von der Webmaschine das gleiche Schicksal, das ihnen noch viel schrecklicher erschien als ihr gewiß auch nichts weniger denn beneidenswertes Los als Handweber.

Das Jahr 1830 war für die Schweiz ein Revolutionsjahr. Die französische Julirevolution, die den König Karl davon gejagt hatte, verfehlte ihre aufrüttelnden Rückwirkungen auch auf die Schweiz nicht und in den Kantonen Thurgau, St. Gallen, Aargau, Baselland, Solothurn, Bern, Waadt, Luzern, Schaffhausen usw. rührten sich die Liberalen, das meiste Volk hinter sich, gegen das aristokratische Regiment, das sich in seiner Ausschließlichkeit und volksverachtenden Selbstüberhebung kaum viel vom monarchistischen Absolutismus unterschied. Der Liberalismus siegte und eine neue Aera der wirtschaftlichen und politischen Entwicklung war eröffnet.

Im Kanton Zürich spielte sich die große einleitende Aktion der unblutigen Revolution in dem 21 Kilometer von der Stadt Zürich entfernten Bezirkshauptort Uster ab, wo sich am 22. November 1830 8000 bis 10 000 Mann versammelten, um die Forderungen des Volkes für eine neue freiheitliche Verfassung aufzustellen. Wie notwendig und reif diese Verfassungsrevision war, bewies die nachherige Annahme der neuen Verfassung in der Volksabstimmung mit 40 000 gegen nur 1725 Stimmen.

An dieser glänzend verlaufenen Verfassungsbewegung hatten sich auch unsere Weber mit den besten Hoffnungen beteiligt. Als das „Memorial von Uster" aufgestellt wurde, verlangten die Weber die Aufnahme des Verbots der Webemaschinen und der Redner Steffen gab ihnen die Versicherung: „Au dem mues ghulffe sy!" (Auch dem muß geholfen sein.) Das war aber ein gefährliches und unerfüllbares Versprechen, das sich bitter rächen sollte. Mit der zunehmenden Not drangen die Weber immer entschiedener auf die Erfüllung des ihnen gegebenen Versprechens sowie auf Abhilfe gegen ihr Elend. Sie wurden durch gesammelte Lebensmittel und Gelder unterstützt; man bemühte sich, sie durch aufklärende Zeitungsartikel zu beschwichtigen, aber es wurde damit der gewünschte Erfolg nicht erzielt. Und es wurde dem Faß der Boden ausgeschlagen, als die mechanische Spinnerei von Corrodi u. Pfister in Ober-Uster einige Webmaschinen aufstellte und so die Gefahr der Vernichtung der Handweberei akut geworden war. „Jetzt stand der geheime Feind der Bevölkerung, dessen Ankunft sie längst gefürchtet, vor ihren Augen und die Fabrik wurde der Gegenstand ihres tiefsten Hasses."

Am 22. November 1833, an welchem Tage wieder in Uster die Erinnerungsfeier des erfolgreich gewesenen Ustertages vor zwei Jahren begangen wurde, kamen auch die Weber in großen Scharen daher und zündeten die Fabrik mit den gehaßten Spinn- und Webemaschinen an. Alle Versuche von Beamten und anderen Personen, die empörten Weber von ihrem unheilvollen Tun abzuhalten, waren vergebens, das Verhängnis nahm seinen Lauf. Der genannte Egli erklärte gegenüber den Mitgliedern des Versammlungskomitees: „Ja, ich weiß, was ich tue, denn ich bin jetzt 51 Jahre alt, aber wir sind es uns und unsern Kindern schuldig, die Maschinen zu zerstören, weil sie uns um den Verdienst bringen. Diese muß verbrannt sein; bis dahin haben wir keine Ruhe und kein Glück."

Das Ende war die Verhaftung von 75 Männern, von denen der Staatsanwalt gleich in Uster noch 17 freiließ, 2 in Uster im Gefängnis beließ und 56

nach Zürich ins Gefängnis transportiert wurden. Acht Monate später spielte der letzte Akt im Gerichtssaal, wo die unglücklichen Weber als gebrochene und mutlose Menschen sich verantworten mußten und von der racheerfüllten herrschenden liberalen Bourgeoisie mit entsetzlichen Strafen belegt wurden. Die Bestialität dieser Klassenjustiz stand auf dem Niveau des Wahnes der armen Weber von Uster; aber sie hatte keinerlei Entschuldigung für sich, während der Brand von Uster mit vielen Gründen entschuldigt, wenn auch nicht gerechtfertigt werden konnte.

Stutz nannte das Ereignis von Uster die „Folge verabsäumter Volksaufklärung". Es war aber auch die Folge der kapitalistischen Schandwirtschaft, die einen verbrecherischen Raubbau mit der Volkskraft trieb, ungehindert treiben und z. B. in den Spinnereien bei ununterbrochenem Betrieb selbst Kinder schon vom 5. Lebensjahre an täglich 14, 15, ja 16 Stunden gegen einen Hungerlohn von wenigen Rappen ausbeuten konnte! Und die Lohnverhältnisse der Männer und Frauen waren nicht viel besser.

Das liberale Regiment im Kanton Zürich war von kurzer Dauer. Im Jahre 1839 siegten wieder die Konservativen. Die einzige gute Tat, die die Konservativen vollbrachten, war die Amnestierung der armen Brandstifter von Uster, soweit sie noch am Leben und im Zuchthaus waren.

Seither hat die Webmaschine ihren Siegeszug vollendet und die Handweberei in der Baumwollindustrie restlos beseitigt. Hunderte mechanischer Spinnereien und Webereien mit etwa 30 000 Arbeitern und Arbeiterinnen zählt heute die Schweiz und wenn auch die Arbeits- und Lohnverhältnisse besser sind als damals, das Textilarbeiter- und insbesondere das Weberelend besteht auch heute noch. In manchen Tälern ist die Spinner- und Weberbevölkerung degeneriert und auch für die Arbeiterbewegung nicht dauernd zu gewinnen. Und dennoch bringt sie ihnen die Morgenröte einer neuen Zeit, einer besseren, befreienden und glücklichen Zukunft — während der Feuerschein des Brandes von Uster nur das Unglück zahlreicher armer Weber und ihrer Familien sowie den endlichen Sieg der Webmaschine über die Handweberei bedeutet hatte. D. Zinner.

Kongresse.

Siebenter Internationaler Metallarbeiter-Kongreß.

Berlin, 6. und 7. August.

Der Kongreß ist der stärkstbesuchte seit Bestehen des Internationalen Metallarbeiterbundes. Es waren anwesend aus Deutschland 31 Delegierte, die 544 000 Mitglieder vertraten, aus England 14 Delegierte, die 149 865 Mitglieder vertraten, aus Oesterreich 13 Delegierte für 64 050 Mitglieder, aus Belgien 10 Delegierte für 22 600 Mitglieder, aus Ungarn 4 Delegierte für 17 480 Mitglieder, aus Dänemark 2 Delegierte für 11 800 Mitglieder, aus Frankreich 3 Delegierte für 30 500 Mitglieder, aus Italien 1 Delegierter für 8000 Mitglieder, aus Holland 2 Delegierte für 3500 Mitglieder, aus Schweden 2 Delegierte für 26 000 Mitglieder, aus der Schweiz 2 Delegierte für 24 170 Mitglieder und aus Norwegen 1 Delegierter für 10 800 Mitglieder. Insgesamt waren anwesend 85 Delegierte aus 13 Ländern, die 28 Organisationen mit 1 069 712 Mitgliedern vertraten. Das ist gegenüber dem vor drei Jahren in Birmingham stattgefundenen Kongreß eine Steigerung um 229 446 Mitglieder.

Zum erstenmal waren auf diesem Kongreß die italienischen Metallarbeiter vertreten. Wenn auch Amerika diesmal auf dem Kongreß nicht vertreten war, so ist doch insofern ein Fortschritt zu verzeichnen, daß amerikanische Metallarbeiterorganisationen dem Internationalen Metallarbeiterbund angeschlossen sind. Allerdings fehlt noch der größte Teil der amerikanischen Organisationen.

Aus dem Bericht des Sekretärs ging hervor, daß der Austausch von Informationen zwischen den einzelnen Nationen und Organisationen bereits einen erfreulichen Umfang angenommen hat. Auch war es möglich, das Gegenseitigkeitsverhältnis einzelner Länder betreffend die Uebernahme zureisender Mitglieder besser als bisher zu regeln. Der auf dem Kongreß vor drei Jahren angebahnte Versuch, auch mit England bestimmte Abmachungen über die Uebernahme der Mitglieder zu treffen, ist nicht gelungen, weil die Organisationen in England trotz aller Bemühungen der englischen Metallarbeiter selbst immer noch zu sehr zersplittert sind. Erst wenn einigermaßen von einheitlichen Organisationen der englischen Arbeiter gesprochen werden kann, wird es möglich sein, diese Materie zufriedenstellend regeln zu können. Die ebenso dringende und wichtige Aufgabe der gegenseitigen Hilfe bei Streiks, die die Kräfte der den Kampf führenden Organisationen übersteigt, konnte trotz der Bemühungen vor drei Jahren auf dem letzten Kongreß bis jetzt nicht zur Zufriedenheit erledigt werden. Auch hier trugen den größten Teil der Schuld die Organisationsverhältnisse in England, die es so überaus schwierig machen, einen Schritt vorwärts zu kommen.

An namhaften Unterstützungen wurde in der verflossenen Berichtsperiode lediglich den Metallarbeitern in Turin eine größere Summe überwiesen. Sonst war in den drei Jahren die finanzielle Hilfe des Bundes nicht erheblich in Anspruch genommen. Beim Punkt 3 der Tagesordnung: „Beratung über den Ausbau der gegenseitigen Beziehungen" machte ein englischer Delegierter namens der gesamten englischen Delegation folgende Vorschläge:

Erhaltung der Mitgliedschaft. Mitglieder, die sich im Ausland aufhalten, sind bei Erlangung einer Arbeitsstelle in die entsprechende Organisation jenes Landes als bezugsberechtigte Mitglieder aufzunehmen und haben Anspruch auf die den Mitgliedern der besagten Organisation durch die Statuten zugestandenen Rechte und Privilegien. Dies darf in keiner Weise die Stellung des Mitgliedes im heimischen Verein beeinträchtigen. Das alles gilt unter der Voraussetzung, daß das übertretende Mitglied die folgenden Ausweise vorzeigt:

a) Ein Mitgliedsbuch und andere Dokumente, woraus die Dauer der Mitgliedschaft hervorgeht und welche beweisen, daß das Mitglied in seiner eigenen Organisation alle seine Pflichten erfüllt hat.

b) Eine vom Internationalen Metallarbeiter-Bund ausgestellte Uebertrittskarte; aus dieser Uebertrittskarte muß der Betrag der Reise- und Arbeitslosenunterstützung hervorgehen, den das Mitglied von seiner eigenen Organisation erhalten würde; ferner steht es den Organisationen frei, unter sich über die Zahlung von Unterstützungen an solche Mitglieder Vereinbarungen zu treffen.

Moralische Unterstützungen, wenn Organisationen im Kampf stehen. Die zum Bunde gehörigen Organisationen sind ver-

pflichtet, während eines Streiks oder Aussperrungen einander nachfolgend bezeichnete Unterstützungen zu gewähren:

Moralische Unterstützung. 1. Die Organisationen haben Auskunft über Arbeitsverhältnisse und Löhne bei Konkurrenzfirmen sowie über Zweiggeschäfte der von einem Streik oder einer Aussperrung betroffenen Firmen zu geben. Ferner haben sie an die Arbeiter desselben Gewerbes Warnungen vor dem Zuzug nach Bezirken, wo der Streik im Gange ist und vor Vollendung von Arbeiten für die Firmen, bei welchen der Kampf vor sich geht, zu veröffentlichen.

2. Die moralische Unterstützung kann die Form eines Sympathiestreiks annehmen.

Materielle Unterstützung im Kampfe stehender Organisationen. Materielle Unterstützung kann nur dann verlangt werden, wenn

a) der Kampf bereits von einiger Dauer war und

b) die Anforderungen desselben die Hilfsmittel der in Frage stehenden Organisation übersteigen.

Wie das Verlangen um finanzielle Unterstützung zu stellen ist. Die anspruchstellende Organisation hat zuerst ihr Gesuch um Unterstützung an den Sekretär der nationalen Abteilung zu richten und eine Darstellung beizugeben betreffend:

1. Den Betrag der bei Beginn der Arbeitseinstellung vorhandenen Fonds.

2. Die Zahl der direkt beteiligten Arbeiter.

3. Die wöchentlich gezahlte oder zu zahlende Unterstützung.

4. Die Höhe des von den Mitgliedern gezahlten Wochenbeitrags.

5. Etwaige Erhöhung des Beitrages seit dem Tage des Beginns des Kampfes.

6. Ob der Kampf mit vollem Wissen und der Zustimmung des Organisationsvorstandes unternommen wurde. Ferner alle anderen Angaben, die in bezug auf den Kampf oder dessen Aussichten von Wert sind.

Bei Erhalt des Obigen soll der Landesvertrauensmann eine Sitzung seines Beirates einberufen, um die erhaltene Auskunft zu beraten, und wenn dieser glaubt, daß die Umstände die Forderung um finanzielle Unterstützung rechtfertigen, so hat er den Landesvertrauensmann zu benachrichtigen, alle von der ansuchenden Organisation erhaltenen Angaben, mit einer Empfehlung, daß die Unterstützung gewährt wird, an den Internationalen Sekretär zu senden.

Bei Erhalt dieses hat der Sekretär des Internationalen Bundes eine Sitzung des Centralcomités, bestehend aus den Landesvertrauensmännern, einzuberufen, um über den Vorschlag zu beschließen. Die Kosten der Sitzung des Centralcomités sind aus der Bundeskasse zu bestreiten oder andernfalls von den angeschlossenen Organisationen im Verhältnis zu ihrer Mitgliederzahl aufzubringen.

Wie bewilligte Unterstützungen zu verwenden sind. Alle bewilligten Unterstützungen sollen an den Landesvertrauensmann gezahlt werden, der dieselben dem Internationalen Sekretär an das Hauptbureau des Bundes überweist; aber im Fall von Unterstützungsgeldern, die in dem Lande eingehoben werden, wo der Streik im Gange ist, sind diese Gelder durch den Landesvertrauensmann der im Kampfe stehenden Organisation zu senden, die einen Ausweis darüber an das Internationale Bureau zu senden hat.

Der Sprecher der englischen Delegation beantragte, diese Vorschläge auf dem Kongreß anzunehmen und sie dann den einzelnen Organisationen zur Annahme zu empfehlen; innerhalb sechs Monate muß dann die Antwort der Organisation einlaufen.

Des weiteren beantragte der Redner, noch die Bestimmung anzufügen, daß der Extrabeitrag für internationale Unterstützung 8 Pf. pro Mitglied und Woche für die Dauer von 6 Wochen nicht übersteigen soll.

Dieser Vorschlag wurde allseitig von den Vertretern der verschiedenen Nationen als erfreulich begrüßt, da mit diesem Vorschlag endlich einmal auf dem Gebiet der gegenseitigen Hilfe bei Streiks usw. ein kräftiger Schritt vorwärts getan wird. Die Vertreter aller Nationen erklärten ihre Zustimmung zu diesem Vorschlag, nur die Franzosen erhoben Bedenken, die jedoch auch zerstreut werden konnten, und so fand unter lebhaftem Beifall der Vorschlag der Engländer einstimmige Annahme.

Es bleibt abzuwarten, ob die im Vorschlag vorgesehene Urabstimmung bei den einzelnen Organisationen das erhoffte Resultat der Zustimmung bringt.

Ein anderer Punkt der Tagesordnung: Die Begrenzung des Tätigkeitsgebietes der internationalen Verbände, bezog sich in der Hauptsache auf Grenzstreitigkeiten und wurde ohne wesentliche Debatte erledigt, nachdem der Vertreter der französischen Goldarbeiter die Begründung zu seiner Haltung in diesem Punkt präzisiert hatte. Ein allgemeines Interesse trat bei Erledigung dieses Punktes nicht zutage.

Beim nächsten Punkt der Tagesordnung: Regelmäßige Berichterstattung an das Internationale Sekretariat, wurde die Frage der einheitlichen Berichterstattung an das Sekretariat als äußerst erwünscht bezeichnet, nur dann seien Vergleiche möglich. Zu diesem Zweck ist ein einheitliches Schema für die Berichte an den Internationalen Sekretär beschlossen und wird es deshalb, wenn nach diesen Formularen verfahren wird, in Zukunft leicht möglich sein, zutreffende Vergleiche über die verschiedensten Angelegenheiten der einzelnen Organisationen anstellen zu können.

Beim nächsten Punkt der Tagesordnung: Wahl des Sekretärs, wurde Schlicke-Stuttgart einstimmig zum Internationalen Sekretär wiedergewählt.

Des weiteren wurde beschlossen, den nächsten Internationalen Metallarbeiterkongreß in Wien 1916 abzuhalten.

Lohnbewegungen und Streiks.

Zur Werftarbeiterbewegung.

Die Hoffnung, daß die Wiederaufnahme der Arbeit sich glatt vollziehen würde, nachdem die Werftarbeiter in sämtlichen Werften sich dem Beschlusse der außerordentlichen Generalversammlung des Metallarbeiterverbandes gefügt hatten, erfüllt sich leider nicht. Die Werftbesitzer, insbesondere in Hamburg, scheinen sich als die Sieger zu fühlen, während doch in Wirklichkeit lediglich die gewerkschaftliche Disziplin der Arbeiterorganisation gesiegt hat. Die Unternehmer haben nicht nur angeordnet, daß die Wiedereinstellung der Arbeiter durch ihren Arbeitsnachweis, das berüchtigte Maßregelungsbureau, erfolgen soll, sondern sie versuchen auch, die Arbeiter nach Möglichkeit zu schikanieren. Eine Zuschrift an das „Hamburger Echo" schildert die Vorgänge folgendermaßen:

„Wie allgemein bekannt sein dürfte, wurde auf der außerordentlichen Generalversammlung der Metallarbeiter

praktizierten sozialdemokratischen Tendenzen den Anstoß zu der Gründung gegeben hätten. Im Verlaufe seiner scharfen Angriffe auf den „roten" Verband beteuerte Redner, daß der Bund von Anfang an tariftreu gewesen. Er bedaure nur, daß man sich zu lange habe abhalten lassen, das gewerkschaftliche Prinzip an die erste Stelle zu setzen. Das Versäumnis sei auf unangebrachte Rücksichtnahme auf die Mitglieder zurückzuführen, die ihrer politischen Ansicht und Weltanschauung nach gar nicht in den Bund gehört hätten. Diese hätten sich gegen die Emanzipation von der Unterstützungsvereinigung zur ausgesprochen gewerkschaftlichen Organisation gewendet, weil sie innerlich zum Verband gehörten und diesem keine Konkurrenz geschaffen wissen wollten. Ganz besonders bedauerte Thränert, daß der Anschluß an den christlichen Gesamtverband nicht schon viel früher zustande gekommen. Ohne diesen Anschluß wäre der Bund außerstande gewesen, sich der „Machinationen des Verbandes" und der „Vergewaltigungen" des dem Verbande willfährigen Tarifamts zu erwehren. Mit dem Anschluß an den christlichen Gesamtverband habe der Bund eine gesunde Grundlage bekommen. Da durch das Zusammenarbeiten der Prinzipalität mit dem Buchdruckerverband (Arbeitsmonopolvertrag, Tariftreuerklärung des Bundes usw.) die Buchdrucker bis zu 90 Proz. in den „roten" Verband hineingetrieben worden seien, gelte es jetzt, zu retten was zu retten ist. Es müßten die Kollegen zurückgewonnen werden, die während der Mitgliedschaft im Verbande noch nicht der Sozialdemokratie verfallen seien, und zum anderen müsse versucht werden, die Jugend zu gewinnen.

Die Zahl der Mitglieder steht nach wie vor im umgekehrten Verhältnis zu dem Lärm, den die Gutenbergbündler, namentlich anläßlich der diesjährigen Jubiläums-Generalversammlung machen. Sie ist von 2974 im Jahre 1910 auf 3296 im Jahre 1912 gestiegen. Von den 194, die im Jahre 1912 gewonnen wurden, sollen 110 sein, die nach teils jahrelanger Mitgliedschaft im Verbande zum Bund übergetreten sind. Wie der Referent einfließen ließ, sollte die Generalversammlung über die Mittel Beschluß fassen, wie auf diesem Wege in Zukunft noch größere Erfolge zu erreichen seien. Im übrigen könne der Bund, dessen Finanzen gute seien, getrost in die Zukunft blicken.

Mit den angedeuteten Mitteln waren im wesentlichen die Erhöhung der Unterstützungen und der Invalidenpensionen gemeint. Die Erhöhung ist in der geheimen Sitzung, in der der Geschäftsbericht und eine Reihe anderer Dinge diskutiert worden sind, beschlossen worden. Um die höheren Leistungen gewähren zu können, sind gleichzeitig die Beiträge von 95 Pf. auf 1,20 Mk. erhöht worden. Das Statut tritt mit dem 4. Oktober in Kraft.

Die schärfsten Angriffe auf den Verband und das Tarifamt wurden bei Behandlung des Punktes: „Die Stellung des Gutenbergbundes in der Tarifgemeinschaft der Deutschen Buchdrucker" erhoben. Hier schoß Herr Stegerwald den Vogel ab, indem er unter dem Beifall der Versammlung wiederholt von dem „Klüngel" sprach, der im Tarifamt herrsche und der bei den Verhandlungen 1911 vom Vertreter des Bundes ausgeräuchert worden sei. Der Bund werde sich auch hinfort von dem Klüngel im Tarifamt nichts in seine Bearbeitung der Jugend hineinreden lassen. Der Redakteur des „Typograph" sagte u. a.: die vom Tarifamt verweigerte Rechnungslegung scheue das Amt sich, zu geben, weil dann offenbar werden würde, wie Tarifamt und Verband auch in finanziellen Dingen, und ungerechterweise und zuungunsten des Bundes, sich „in die Hände arbeiten".

Erwähnt mag noch werden, daß Herr Treffert das Gutachten, das die Dresdener Gewerbekammer auf Ersuchen der sächsischen Regierung über die angeblich die Sozialdemokratie fördernden Tendenzen der Tarifgemeinschaft erstattete, für zutreffend erklärte. Er benannte zum Beweis eine Anzahl angeblich verbürgter Vorfälle und stellte eine ausführlichere Beweisführung im „Typograph" in Aussicht. Dabei soll auch die Abwehrerklärung des Tarifamts als unwahr charakterisiert werden.

Man sieht, die Herren behaupten sehr viel. Es wird sich zeigen, was sie davon wahrhalten können, wenn es darauf ankommt. Wolf.

Mitteilungen.

Für die Verbandsexpeditionen.

Der Nr. 35 des „Corr.-Bl." wird die Statistische Beilage über die Gewerkschaften im Jahre 1912 beigelegt. Die Nummer erscheint im Gesamtumfange von 48 Seiten.

Unterstützungsvereinigung der in der modernen Arbeiterbewegung tätigen Angestellten.

Zur Mitgliedschaft haben sich gemeldet:

Berlin:	Goldberg, Paul, Ang. d. Transportarbeiter-Verbandes.
"	Schnapp, Fritz, Ang. des Transportarbeiter-Verbandes.
"	Schröder, Franz, Bureauang.
"	Zynda, Johann, Ang. d. Centralkrankenkasse der Schmiede.
Breslau:	Kuntke, Paul, Ang. d. Holzarb.-Verbandes.
Frankfurt a. M.:	Sack, Emilie, Kontorangest.
"	Plies, August. Ang. des Bauarbeiter-Verbandes.
Göppingen:	Massuthe, Max, Ang. d. Textilarbeiter-Verbandes.
"	Mögel, Johann, Ang. d. Fabrikarbeiter-Verbandes.
Greiz:	Schönfeld, Hugo, Angestellt. des Textilarbeiterverbandes.
Hamburg:	Groth, Andreas, Ang. d. Zentr.-Kr.-K. d. Zimmerer.
"	Maßmann, Julius, Angest. der Zentral-Kr.-K. d. Drechsler.
"	Bachmann, Richard, Ang. d. Bäckerverbandes.
"	Jung, Johannes, Ang. d. Allg. Krankenkasse der Metallarbeiter.
Harburg:	Pieck, Walter, Expedient.
"	Leverenz, Marie, Parteiangest.
Herten:	Behring, August, Angestellt. des Bergarbeiterverbandes.
Karlsruhe:	Geck, Eugen, Geschäftsführer.
Köln:	Drouvé, Fritz, Expedient.
Leipzig:	Wicklein, Karl, Geschäftsführer.
"	Schlegel, Albert, Ang. d. Steinarbeiter-Verbandes.
Magdeburg:	Schülein, Georg, Angestellt. des Brauerverbandes.

Verantwortlicher Redakteur: Paul Umbreit; Verlag: C. Legien, beide Berlin SO., Engel-Ufer 15.
Druck: Vorwärts Buchdruckerei und Verlagsanstalt Paul Singer & Co., Berlin SW. 68.

Astr 3484.3

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JANUARY.

Sun.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
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Pilots and masters of vessels are earnestly requested to send information of dangers, notices of new shoals and channels, facts of interest to mariners, and suggestions for increasing the usefulness of charts or of these Tide Tables to the "Superintendent of Coast and Geodetic Survey, Washington, D. C." A piece of the chart affected, showing the change proposed, should accompany the information supplied. This Office will replace, free of charge, any chart so used.

A limited number of CHART CATALOGUES, indicating the outlines of Coast and Geodetic Survey Charts, will be sent, free of charge, to any address.

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SUPERINTENDENT OF THE COAST AND GEODETIC SURVEY,
WASHINGTON, D. C., U. S. A.

PREFACE.

The following tide tables for the year 1912 have been prepared in the tidal division of the Coast and Geodetic Survey Office. They are essentially similar to the volumes for preceding years, but improved values have been introduced wherever better data could be made use of.

Tide tables for the use of mariners have been published by the Coast and Geodetic Survey every year since 1853. For the first fourteen years these tables appeared as appendixes to the Annual Reports of the Superintendent of the Survey, and consisted of more or less elaborated means for enabling the mariner to make his own tide predictions as occasion arose. The first attempt by this Survey to give predicted tides was by the issue of two pamphlets entitled "Tide Tables for the Atlantic Coast of the United States for the year 1867," and "Tide Tables for the Pacific Coast of the United States for the year 1867," respectively. The former contained the predicted times and heights of the high waters only for each day of the year 1867 at 15 stations, together with tidal constants and differences for 108 stations. The latter contained similar predictions for 4 stations, together with differences for 16 stations. This marked a distinct advance over the earlier tables which had been issued by this Survey.

The following year it was found desirable to include the low waters in all the predictions for the Pacific Coast, but for only one station on the Atlantic Coast, and it was not until the year 1887 that the low waters were given for all the Atlantic Coast stations. Commencing with the year 1896 the tide tables were extended to include the whole maritime world, practically as in the present volume.

In order to meet the demand for a cheap edition of the tide tables for the United States and adjacent waters, two reprints have been issued, one for the Atlantic Coast of the United States, including Canada and the West Indies, price 15 cents; and the other for the Pacific Coast of the United States, together with a number of foreign ports in the Pacific Ocean, price 10 cents.

This Survey acknowledges its indebtedness to the following-named authorities for valuable tidal information used in the preparation of these tables, in addition to the large number of observations already in its possession:

W. D. Alexander, Surveyor-General Hawaiian Islands, tides at Honolulu, Hilo, and Kahului, H. I. (1899).

W. P. Anderson, C. E., Chief Engineer, Department of Marine and Fisheries, Ottawa, Canada, tidal information for Canadian ports.

Annales hydrographiques, Paris.

Annuaire des Marées de la Basse Cochinchine et du Tonkin, for 1894 and subsequent years.

Annuaire des Marées des côtes de France, Paris.

Anuario de la Dirección de Hidrografía, Madrid, Spain.

Anuario Hidrográfico del Río de la Plata, por C.-A. Avocena, Montevideo, 1891.

Ricardo M. Arango, Division Engineer, Panama Canal (1906), tides at Cristobal and Panama.

Edwin B. Simpson-Baikie, Royal Mail Steam Packet Company, Southampton, England, tides at Margarita Island, Venezuela.

Manoel Carneiro de Souza Bandeira, Civil Engineer, Hydrographic Service, Rio de Janeiro, Brazil.

A. J. Pinto Basto, Lieut. Commanding the *Mindovy*, Portuguese Navy, Lisbon, Portugal (1897).

John Barrett, United States Consul-General (1894), Bangkok, Siam.

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A. M. Bisbee, Coast Inspector (1894), Shanghai, China.

Roger S. G. Boutell, Secretary of Legation of the United States (1906), The Hague, the Netherlands.

Canadian Tidal Survey (see "Tidal and Current Survey of Canada").

R. W. Chapman. Professor in University of Adelaide, harmonic tidal constants for Port Adelaide, South Australia.

Charts of various nationalities: American, English, Dutch, French, German, and Spanish.

Chief of Engineers, U. S. A., War Department, Washington, D. C.

J. M. Clapp, Assistant U. S. Engineer (1908), tides at Toke Point, Washington.

Powell Clayton, United States Ambassador (1905), Mexico.

Coast Pilots and Pilots of various seas: American, English, French, German, Spanish, and Portuguese.

John G. Coolidge, United States Secretary of Legation (1905), Peking, China.

E. L. Corthell, C. E., tidal observations at the mouth of the Panuco River, Tampico, Mexico.

George H. Darwin, Cambridge, England.

W. Bell Dawson, D. Sc., C. E., Engineer in charge of Tidal and Current Survey of Canada; Department of Marine and Fisheries, Ottawa, Canada. Reports of progress, of Tidal and Current Survey, Tide Tables, and tidal differences for Canadian ports.

Charles Denby, United States Minister (1894), Peking, China.

Director Oficina Hidrográfica, Valparaiso, Chile, hourly heights of the sea at Valparaiso for one year.

H. Percival Dodge, United States Secretary of Embassy (1905), Berlin, Germany.

Edwin Dun, United States Minister (1894), Tokyo, Japan.

Alex. Duncan, Pilot Master (1894), Georgetown, Demerara.

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G. W. Ellis, United States Secretary of Legation (1905), Monrovia, Liberia.

Exploring Expeditions of various nations: American, Dutch, English, French, German, and Spanish.

W. H. Finley, a pamphlet on the Approximate Tide-Constants for Table Bay and Algoa Bay, Africa, through C. H. Benedict, United States Consul (1894), Cape Town.

E. H. Francis, Pilot, Seattle, Wash.

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E. A. Gieseler, Assistant U. S. Engineer, tides at Panama, January 1, 1885, to September 30, 1888.

David Gill, H. M. Astronomer (1894), Cape Town Observatory, Cape Town, Africa.

W. T. Glasgow, Secretary of Marine Department, Wellington, New Zealand, tidal observations for Port Chalmers, New Zealand, for the year 1898.

Geo. W. Goethals, Chairman Isthmian Canal Commission (1909), tides at Cristobal and Panama.

R. J. L. Guppy (1894), Trinidad, West Indies.

Arthur S. Hardy, United States Minister (1905), Madrid, Spain.

P. Hatt, Service Hydrographique de la Marine, Paris, France, harmonic constants for five French ports, three ports in the Indian Ocean, and three ports in Cochin China.

Hydrographer, Hydrographic Office, Navy Department, Washington, D. C.

Hydrographic Office, Admiralty, London, England, the loan of valuable tidal records in many parts of the world.

Ingénieur en Chef de Construction du Canal de l'Isthmus de Panama, the tides at Colon and Panama.

Japanese Naval Department, through Edwin Dun (1894), United States Minister, Tokyo, Japan.

Contre-Admiral R. von Kalmár, Director of the Naval Observatory, Pola, Austria (1897), hourly heights of the sea at Pola for the four years 1884–1887.

Walter Katzenberger, tides at Old Plantation Flats Light-House, Va.

Alex. Lemos, Engenheiro do Servico de Marés e Correntes (1909), tidal constants for Brazilian ports.

London, Edinburgh, and Dublin Philosophical Magazine.

Ernest Lyons, United States Minister Resident and Consul-General (1905), Monrovia, Liberia.

Curtis J. Lyons, Hawaiian Government Survey (1895), Honolulu, Hawaiian Islands.

Fenton R. McCreery, Secretary of American Embassy (1906), Mexico City, Mexico.

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J. P. Prince, United States Consular Agent (1894), Durban, Africa.

Proceedings of the Royal Society of London.

B. S. Rairden, United States Consul (1894), Batavia, Java.

Reichs-Marine Amt, Berlin, Germany, harmonic constants for three German ports.

Reports of the British Association for the Advancement of Science.

Reports on the operations of the Survey of India Department, Calcutta, India.

E. Roberts, Chief Assistant, Nautical Almanac Office, London, England, harmonic constants for Canadian ports, calculated from the observations and data of the Canadian Tidal Survey. Also harmonic constants for Hongkong, China, and Singapore, Malay Peninsula.

Capt. John Rodgers, U. S. N., tides at Papeeti, Tahiti.

H. H. Rousseau, Civil Engineer, U. S. Navy (1906), Mare Island, Cal.

H. C. Russell, H. M. Astronomer (1894), Sydney Observatory, Sydney, New South Wales.

C. M. Saville, Assistant Engineer, Panama Canal (1909), tides at Cristobal and Panama.

S. Schneegans, United States Consul (1894), Saigon, Cochin China.

Edgar K. Smoot, C. E., tidal observations at Manzanilla, Mexico.

James Spaight, United States Vice-Consul (1894), Demerara.

John F. Stevens, Chief Engineer, Isthmian Canal Commission (1906), tides for Colon and Panama.

Dr. J. P. Van der Stok, Director of the Meteorological and Magnetic Observatory (1894), Batavia, Java Studiën over Getijden. Overgedrukt uit het Tijdschrift van het Koninklijk Instituut van Ingenieurs, Afdeeling Nederlandsch-Indië, Batavia, Java. Also, "Wind and Weather, Currents, Tides, and Tidal Streams in the East Indian Archipelago," Batavia, Java, 1897.

D. C. F. Thompson, R. N., Harbor Master (1894), Kingston, Jamaica.

David E. Thompson, United States Ambassador (1907), Mexico.

Tidal and Current Survey of Canada, Reports of progress, Tide Tables and harmonic constants for Quebec, St. Paul Island in Cabot Strait, Halifax, Nova Scotia; St. John, New Brunswick; Victoria, and Sand Heads. Strait of Georgia, British Columbia; from which the Tide Tables for Halifax and St. John are calculated.

Tide Tables for the British and Irish Ports, together with the Times and Heights of High Water at Full and Change for the Principal Places on the Globe, London, England.

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J. T. Walbran, Captain of the D. G. S. *Quadra* (1896), British Columbia.

W. E. Wall, Surveyor, Hawaii (1909), tides at Honolulu.

H. N. P. Wallaston, Secretary of Customs (1894), Melbourne, Victoria.

Rear-Admiral W. J. L. Wharton, R. N., Hydrographer (1896), Hydrographic Office, Admiralty, London, England.

Henry Lane Wilson, United States Ambassador (1910), Mexico.

Thomas Wilson, Secretary of Harbor Trust (1898), Greenock, Scotland.

The predicted time and height of the high and low waters for 70 principal ports or stations are given in Table 1, pages 53–332, for each day throughout the entire year 1912. The predictions for 50 of these ports have been made by means of the Ferrel tide machine, described in Appendix 10 of the Superintendent's Report for 1883. The tides for the other 20 principal ports have been predicted by means of a new tide computing machine, devised and constructed at this office, a description of which will be published later. The harmonic constants used for these predictions, as well as the length of series analyzed, are given in Table 4 of this volume.

These stations are distributed as follows: 20 on the eastern and 7 on the western coast of North America, 5 in South America, 14 in Asia, 1 in Africa, 14 in Europe, and 9 in Oceania. They are usually referred to in this volume as principal or standard ports. These predictions are extended to about three thousand subordinate stations by means of the tidal differences and ratios of Table 3, pages 338–457. The predicted times of all the slack waters for the year 1912 are given for two stations, Seymour Narrows, British Columbia, and Sergius Narrows, Alaska, on pages 498–505.

An explanation of the tables, with examples of their use, is given on pages 37–50, an index of principal ports is given on page 52, and a general index on pages 533–536.

O. H. TITTMANN,
Superintendent.

OCTOBER, 1910.

INTRODUCTION.

TREATISE ON TIDES.

1. *General statements.*

The word *tide* is used to indicate the periodic rising and falling of oceanic and other large bodies of water, due mainly to the attraction of the moon and sun. This rising and falling necessitates a lateral or horizontal movement of the waters; such movements are called *tidal currents.* They usually flow and ebb somewhat in retard of the rising and falling of the tide. As the velocity and direction of tidal currents are much modified by extremely local causes, while the times and heights of the tides remain nearly constant over considerable areas, the currents may with propriety be made to depend upon the tides; for this reason their discussion will be postponed to § 11.

The tide rises until it reaches a maximum height called *high water*, and then falls until it reaches a minimum height called *low water;* these two phases of the tide may be spoken of as *the tides.* For a few minutes before and after high or low water it is difficult to observe any vertical motion in the tide; while thus apparently stationary the tide is said to *stand.* The duration of high or low water stand is usually too vague a quantity to be of much service in describing the character of the tide.

For reasons to be given later, based upon the fact that the tides are chiefly due to the difference between the moon's attraction upon the enveloping sea and the earth as a whole, one would expect that at most tidal stations two high waters and two low waters would occur each lunar day; in other words, to each transit of the moon (inferior as well as superior) there would correspond one high water and one low water. On an average the time of high water at a given station follows the time of transit by a certain number of hours and minutes called the *high water interval* (HWI) or *high water lunitidal interval*, or the *corrected establishment.* In like manner the *low water interval* (LWI) or *low water lunitidal interval* indicates the average number of hours and minutes between the time of transit and the time of low water.

According as the moon is in or near the perigee, apogee, or either tropic, the tides are distinguished as *perigean*, *apogean*, or *tropic* tides. *Spring tides* occur at about the time of new or full moon, and *neap tides* at about the time of either quarter. More definite notions in regard to these tides will be given in § 8.

2. *Directions for observing tides.*

Wherever tides are to be observed, the first thing to do is to fix a well-graduated vertical *staff* in as permanent a position as possible. A solid wall or pile will often furnish a suitable support. The heights of several bench marks above the zero of this staff should then be determined with considerable precision in order to detect any settling or rising in the support of the staff. These bench marks should be of a permanent character and situated at various distances from the staff. The object of such permanence is to enable one to recover the plane of reference at any future time.

Direct staff readings.—The staff and bench marks established, the observer should read the height of the tide at even intervals of time. Readings at the exact hours throughout the twenty-four hours of each day are preferable for most purposes. The kind of time used is immaterial, provided that it be the same throughout the series of observations. It should

always be specified in the record. In making such observations it is of importance to know the time to within about one minute. In high and low water observations readings should be made every ten minutes, say for about forty minutes before to forty minutes after each of the four tides of the day. In reading a height upon the staff, unless the surface of the water be perfectly smooth, note a point midway between the crest and trough of the waves. A glass tube open at both ends and held alongside the staff will facilitate making these readings. When the surface is, as a rule, too rough for staff readings, the water in a well communicating with the sea by means of a pipe half an inch or more in diameter should be observed instead.

Box gauges.—A box gauge consists of a long vertical box inclosing a float which rises and falls with the tide. In some cases the float carries a vertical rod which may itself be graduated; in others the float is attached to a wire or cord which passes over a pulley, then along a graduated scale, and terminates in a counterpoise. This gauge permits readings to be made when the sea is comparatively rough. A simple staff gauge should always be located near a box gauge and the readings of the two should be frequently compared, for it is obvious that the line of flotation is liable to become somewhat altered.

Automatic or self-registering tide gauges.—A gauge of this variety requires a float and box similar to those employed in a box gauge. The motion of the float, as it rises and falls, is communicated to a pencil which traces a curve upon a moving sheet of paper. Uniform motion is imparted to the paper by means of a cylinder or drum driven by a well-regulated clock. The pencil is free to move in a direction perpendicular to the line of motion of the paper. The paper, usually of sufficient length to contain a month's record, is paid out from one cylinder, passes over a second, and is received upon a third. This gauge, besides giving a continuous record, requires a comparatively small portion of the observer's time. Staff readings (upon a staff gauge) and time comparisons should be made at frequent intervals and recorded upon the tidal sheet or marigram. These staff readings should be made within an hour, say, of the times of high or low water.

3. *General properties of tides.*

Confining one's attention to a particular station, the following properties common to most tides are usually revealed by means of a few days' observation:

(1) Two high waters and two low waters occur during each twenty-four or twenty-five hours.

(2) The alternate high or low waters are more or less unequal.

(3) The heights of corresponding tides vary from day to day.

(4) The lunitidal intervals (high or low water) are different for alternate tides.

(5) The lunitidal intervals for corresponding tides vary from day to day.

(6) The inequality in height or interval referred to in (2) or (4) becomes greater as the moon's declination, either north or south, increases. This does not apply, because of the sun's tidal effect, to the lesser inequality at stations where the high and low waters are affected by quite unequal amounts.

(7) The range of tide (as determined from all four tides of the day) is $\begin{matrix}\text{greater}\\\text{less}\end{matrix}$ than usual near the time of $\begin{matrix}\text{new or full moon.}\\\text{the moon's quadrature.}\end{matrix}$

(8) The range of tide is $\begin{matrix}\text{greater}\\\text{less}\end{matrix}$ than usual near the time when the moon is in $\begin{matrix}\text{perigee.}\\\text{apogee.}\end{matrix}$

(9) The lunitidal intervals are $\begin{matrix}\text{shorter}\\\text{longer}\end{matrix}$ than usual near the times of the $\begin{matrix}\text{first and fifth}\\\text{third and seventh}\end{matrix}$ octants.

The above statements do not usually apply to the tides at stations where but one high and one low water occur daily. The readily observable properties of such tides are:

[1] But one high and one low water occur daily when the moon is far from the equator.

[2] Two high and two low waters, both comparatively small, may occur daily when the moon is near the equator.

[3] The moon being far from the equator, the (diurnal) range of tide is $\begin{matrix}\text{increased}\\ \text{decreased}\end{matrix}$ near the time of either $\begin{matrix}\text{solstice.}\\ \text{equinox.}\end{matrix}$

4. *The equilibrium theory of tides.*

The uncorrected equilibrium theory begins by assuming—

(1) That the nucleus of the earth is comparatively rigid (or that at least its outer layer is a rigid shell), and that it is composed of concentric spherical layers, each layer having a constant density.

(2) That the nucleus is covered by a fluid of uniform depth, shallow as compared to the radius of the nucleus, but deep as compared to the rise and fall of tide.

(3) That this fluid has neither inertia nor viscosity, nor is there friction between the fluid layer and the nucleus or the enveloping atmosphere.

As these conditions are far from being realized in the case of nature, observations will show at best only certain approximations toward ideal values. Before introducing the modifications necessary to adapt the theory to the tides, it seems desirable to ascertain what the tendencies are in the ideal case.

Since the angular velocity of the moon in her orbit and the rotary motion of the earth's surface are finite, while the particles of fluid are supposed to respond *immediately* to the forces acting upon them, we may consider the earth's surface as stationary during any given instant, and treat the surface assumed by the water as a case of static equilibrium.

Because of hypothesis (1), the attraction of the moon upon the nucleus is the same as it would have been had the entire mass been concentrated at the earth's center.

At any given place the tide-producing tendencies depend chiefly upon the distance and direction of the disturbing body, and are governed by what may be referred to as Laws I and II.

Law I.—The tendency to produce tides at a given station varies directly as the mass of the disturbing body and inversely as the cube of the body's distance from the earth's center.

In consequence of this law the amplitude of the solar tide ought to be about 0.458 time that of the lunar tide. For the mass of the sun = 331 000, and the mass of the moon = 1/81, the mass of the earth being unity, while the sun's distance = 92 800 000 miles and the moon's distance = 239 000 miles, so that—

$$\text{solar tide : lunar tide} = \frac{331\,000}{(92\,800\,000)^3} : \frac{1}{81} \times \frac{1}{(239\,000)^3}; \tag{1}$$

$$\therefore \text{solar tide} = 0.458 \text{ lunar tide.} \tag{2}$$

The eccentricity of the lunar orbit being 0.055, this law gives

$$\text{perigean range : mean range} = \frac{1}{(1 - \text{eccentricity})^3} : 1, \tag{3}$$

$$\text{apogean range : mean range} = \frac{1}{(1 + \text{eccentricity})^3} : 1, \tag{4}$$

$$\therefore \text{perigean range} = 1.18 \text{ mean range,} \tag{5}$$

$$\text{apogean range} = 0.85 \text{ mean range.} \tag{6}$$

Law II.—The tendencies to produce tide for various relative positions of the tide-producing body are proportional to

$$3 \cos^2 \theta - 1, \tag{7}$$

where θ is the zenith distance of the body corrected for parallax. In other words, θ is the angle at the earth's center defined by the given station and the center of the disturbing body.

If u denote the height of tide expressed in terms of the earth's radius, a, then it is proportional to $3\cos^2\theta-1$; in other words, we may put $u=\alpha'(3\cos^2\theta-1)$. The equation of the surface of the sea at any given instant is

$$\rho=a(1+u) \tag{8}$$

or

$$\rho=a+a\,\alpha'(3\cos^2\theta-1), \tag{9}$$

which is the equation of an ellipsoid whose semiaxes are

$$a(1+2\alpha'),\ a(1-\alpha'),\ a(1-\alpha'). \tag{10}$$

That is, forces acting according to this law cause the surface of the sea to assume the form of an ellipsoid of revolution whose longest axis points toward the tide-producing body.

It will be observed that when the moon, say, is in the zenith (or nadir), the elevation of the sea is $2a\alpha'$ higher because of the existence of the moon; but when in the horizon, the elevation of the sea is $a\alpha'$ lower.

For a given place the height of the tide will vary from hour to hour of the day chiefly on account of the variations in θ; but, as already noted, it varies somewhat on account of the variation in r, the moon's distance.

For a given place the angle θ depends upon the moon's hour angle and its declination, both of which are functions of time. From spherical trigonometry,

$$\cos\theta=\cos\lambda\cos\delta\cos(\psi-l)+\sin\lambda\sin\delta \tag{11}$$

where

λ = geographic latitude of the station,
l = longitude of the station (W. from Greenwich),
δ = moon's declination,
$\psi=mt$ = moon's hour angle (W. from the meridian of Greenwich).

$$\begin{aligned}\therefore a\alpha'(3\cos^2\theta-1)&=\tfrac{3}{8}a\alpha'\cos^2\lambda\cos^2\delta\cos 2(\psi-l)\\&\quad+3a\alpha'\sin\lambda\cos\lambda\sin 2\delta\cos(\psi-l)\\&\quad+\tfrac{1}{2}a\alpha'(3\sin^2\lambda-1)(3\sin^2\delta-1)\\&=\text{height of tide according to the uncorrected equilibrium theory.}\end{aligned} \tag{12}$$

For the lunar tide,

$$a\alpha'=\tfrac{1}{2}\frac{\text{mass of moon}}{\text{mass of earth}}\times\frac{a^4}{(\text{moon's distance})^3}=0.59\text{ feet;} \tag{13}$$

and for the solar tide,

$$a\alpha'=\tfrac{1}{2}\frac{\text{mass of sun}}{\text{mass of earth}}\times\frac{a^4}{(\text{sun's distance})^3}=0.27\text{ feet.} \tag{14}$$

(i) The height of the semidiurnal portion of the lunar or solar tide at a given station is proportional to the cosine of twice the local hour angle of the moon or sun multiplied by the square of the cosine of its declination. The factor depending upon the declination is always near unity.

(ii) The height of the diurnal portion of the lunar or solar tide at a given station is proportional to the cosine of the local hour angle of the moon or sun multiplied by the sine of twice its declination. The factor depending upon the declination varies almost directly with the declination.

(iii) There is a portion of the lunar or solar tide which depends, at a given station, wholly upon the declination of the moon or sun. The height of this portion is proportional to $3\sin^2\delta-1$, where δ represents the declination of the moon or sun. The period of this expression is a half tropical month or year, as the case may be.

The height of the entire tide, or of the surface of the sea, at any given time and place, is the sum of the six terms just referred to—three belonging to the moon and three to the sun.

The corrected equilibrium theory.—To approximately adapt the foregoing theory to the case of nature, we may write the height of the lunar or solar tide in the form

$$\begin{aligned} &R_2 \cos^2\delta \cos\left[2\,(\psi - l) - \varepsilon_2\right] \\ &+R_1 \sin 2\,\delta \cos\left[\psi - l - \varepsilon_1\right] \\ &+R_0\left[3\sin^2\delta - 1\right] \end{aligned} \tag{15}$$

where R and ε must be determined from observations at the given stations. Statements (i), (ii), and (iii) require no modification, except that for "hour angle" we must write "hour angle diminished by a constant appropriate for the station in question" and so for "twice the hour angle."

This correction is theoretically necessary (even if the water have neither inertia nor friction) because the earth's surface is not wholly covered with water, and the equation of continuity can not generally be satisfied when the rise and fall is as given by equation (12) unless we continually alter the plane of reference.

The R's, as did the α's, involve the factor

$$\left(\frac{\text{mean distance of moon}}{\text{actual distance of moon}}\right)^3 = \left(\frac{c}{r}\right)^3 = \left(\frac{\text{actual parallax}}{\text{mean parallax}}\right)^3 \tag{16}$$

In practice the inertia and friction of the water produce important modifications in the R's and ε's from their equilibrium values. Nevertheless, the *form* (15) is capable of approximately representing the rise and fall of the tide in nature. This is especially true, if we make the further modification of taking δ and r at times anterior to the time of tide. Such times, as well as the R's and α's must be determined from observations made at the given station.*

5. *Explanation of phenomena noted in § 3 by the equilibrium theory.*

The tides in (i), § 4, are semidiurnal, while those in (ii) are diurnal. Each may, for any particular day, be represented by a cosine curve of proper length (period) and amplitude. Now it is obvious that the superposition of a diurnal curve upon a semidiurnal will, in general, cause the alternate maxima or minima of the semidiurnal curve to become more or less unequal in height and unequally displaced in time. These statements account for (1), (2), and (4) of § 3. As noted in (ii), § 4, the amplitude of the diurnal curve (lunar or solar) is nearly proportional to the declination of the moon or sun. This explains property (6), § 3.

The superposition of a semidiurnal curve or wave upon another of nearly equal period, but of greater amplitude, simply increases or decreases the amplitude of the latter when approximately like or opposite phases coincide; but when the phases differ by approximately 90° or 270° the principal wave is displaced in time by the subordinate one—accelerated or retarded according as the maximum, say, is 90° in advance or in retard of the maxima of the principal wave. This accounts for properties (3), (5), (7), and (9), § 3. Property (8) has been explained in § 4, where the values of the perigean, apogean, and mean ranges are compared. This amounts to varying the α' or the R's inversely as the cube of the moon's distance from the earth's center.

At a station where observation shows that R_1 is several or many times as great as R_2, expression (15), the number of maxima and minima of a curve composed of diurnal and semidiurnal parts will usually depend upon the number of maxima and minima of the diurnal part when the moon's declination is great; but when the moon is near the equator the number may be governed by the semidiurnal part. This accounts for properties [1] and [2], § 3. The moon crosses the equator and reaches its extreme declination at nearly the same points in the heavens as does the sun. This accounts for property [3].

*Cf. Thomson and Tait's Natural Philosophy, §§ 804–811.

6. A still more perfect form or expression for the equilibrium theory is obtained by developing the tide-producing potential (the principal part of which is inversely proportional to the cube of the disturbing body's distance from the earth's center, and directly proportional to $3\cos^2\theta - 1$, § 4) into a series of cosine terms. For considerable periods of time the coefficients of these terms remain sensibly constant and their angles or arguments increase uniformly with the time. Having found from the development of the potential what are the more important terms, one then assumes that by leaving all amplitudes and epochs arbitrary the series is, by the principle of forced oscillations,* capable of representing the tide at any given station. The harmonic analysis, § 7, has for its object the determination of these amplitudes and epochs from tidal records.

7. *Harmonic analysis.*†

Since the tide is periodic in its character, and since the periods of its causes are known from astronomical considerations, it ought to be possible to represent the height at any given time by means of the Fourier series, or, rather, an aggregation of such series,

$$y = A\cos(at + \alpha) + B\cos(bt + \beta) + \ldots \tag{17}$$

where y is reckoned from mean sea level.

For aiding the imagination, we may suppose that any given term in this series represents the oscillation caused by a fictitious star, or moon, moving uniformly in the celestial equator around the earth, and at a constant distance therefrom, having the property of producing a maximum of the oscillation, or component tide, a certain number of hours after its upper meridian passage, and a minimum the same number of hours after its lower meridian passage.

If a denote the hourly speed of the component A, or the apparent angular velocity of its fictitious moon, and A° its epoch or lag expressed in degrees, A°/a is the lag expressed in hours. Also if $\arg_0 A$ denote the hour angle of the fictitious moon at local mean midnight, $at + \arg_0 A$ is its hour-angle at any subsequent hour t. Consequently the time of high water of the component A is

$$t = \frac{A^\circ}{a} - \frac{\arg_0 A}{a}, \tag{18}$$

and the height at any time t is

$$A\cos(at + \arg_0 A - A^\circ) \tag{19}$$

so that

$$\alpha = \arg_0 A - A^\circ. \tag{20}$$

By replacing A, A°, a, and α by B, B°, b, and β, the corresponding quantities for any other component, B, are obtained.

The heights due to any components may be shown graphically thus (see Fig. 1):

Lay off the hours of the day according to any convenient scale. Draw cosine curves of amplitudes A, B, . . . and of periods $\frac{360}{a}$, $\frac{360}{b}$, . . . hours in length. The first maxima are located upon the hour lines

$$\frac{A^\circ}{a} - \frac{\arg_0 A}{a}, \quad \frac{B^\circ}{b} - \frac{\arg_0 B}{b} \quad \ldots; \tag{21}$$

the succeeding maxima are then fixed by the lengths of the several periods. The symbol ☽ may be used to indicate the time of transit of any fictitious moon.

To combine these curves, add the ordinates for each hour, thus obtaining the resultant tidal curve from which the times and heights of high water and low water may be obtained.

The object of the harmonic analysis is to resolve the observed tide—i. e., observed heights of the surface of the sea—into simple elements of component tides, consisting of simple

*See Laplace, Méc. Cél., IV, iii, § 16.

† See an article entitled Harmonic Analysis of Tidal Observations, by Prof. G. H. Darwin, B. A. A. S. Report, 1883; also, article Tides, Encyclopædia Britannica, ninth edition, and Manual of Tides, Part II, by R. A. Harris.

harmonic oscillations. The quantities a, b, . . . and $\arg_0 A$, $\arg_0 B$, . . . are known from astronomical considerations, so that the analysis of the tide at a given place implies only the determination of the amplitudes A, B, . . . and the epochs A°, B°, . . .

To analyze harmonically the tide at a given place, let its height be given at each hour of the day for a year, say. Sum these ordinates as nearly as may be at the component hours of each component (its harmonics excepted). The sums belonging to each component will be 24 in number and represent sums corresponding to each of the twenty-four hours into which the component day is supposed to be divided. As the summation in each case is made with reference to the component hours, the effect of the other components upon these 24 sums will, in the long run, approach zero or a constant. Having found the 24 heights corresponding

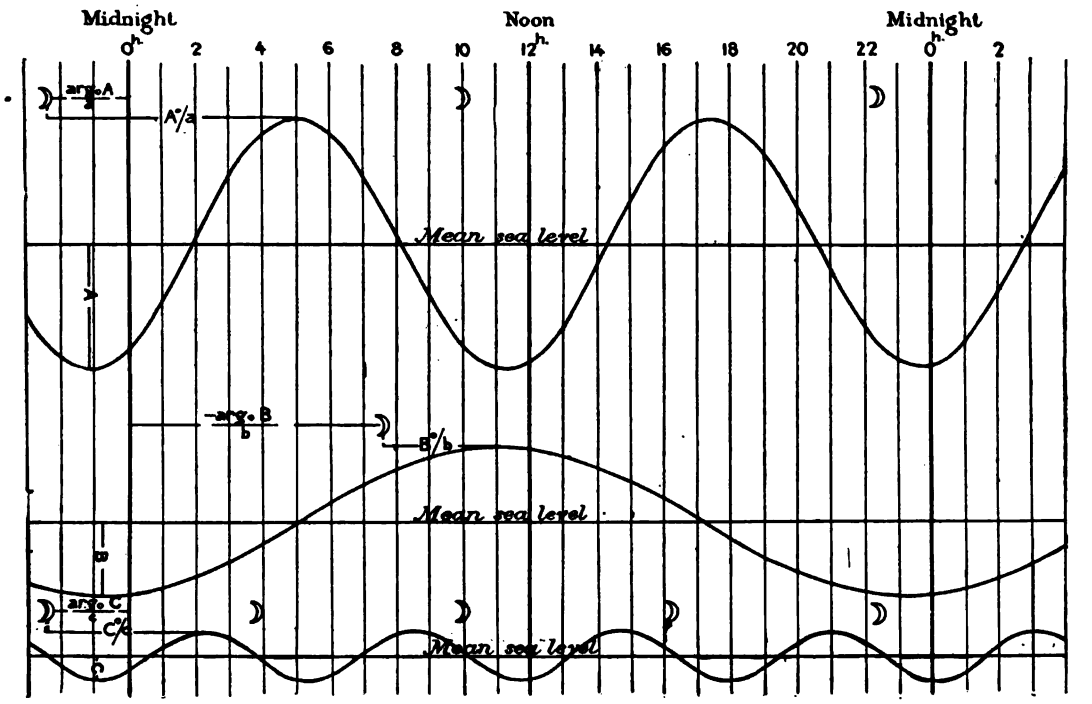

Fig. 1.

to these sums, they may be plotted as hourly ordinates; such a plotting would represent the required component tide combined with its harmonics. To analyze these 24 heights, $h_0, h_1, h_2, \ldots h_{23}$, assume each to be of the form

$$h=H_0+\overline{A}_1 \cos at+\overline{\overline{A}}_1 \sin at+\overline{A}_2 \cos 2\,at+\overline{\overline{A}}_2 \sin 2\,at+ \ldots +\overline{A}_8 \cos 8\,at+\overline{\overline{A}}_8 \sin 8\,at, \qquad (22)$$

where $at=0^\circ, 15^\circ, 30^\circ, \ldots 345^\circ$.

It is not difficult to show that the most probable values of $H_0, \overline{A}, \overline{\overline{A}}$ are given by the equations

$$\begin{aligned}
24\,H_0 &= h_0+h_1+h_2+ \ldots +h_{23}.\\
12\,\overline{A}_1 &= h_0 \cos 0^\circ+h_1 \cos 15^\circ+h_2 \cos 30^\circ+ \ldots +h_{23} \cos 345^\circ,\\
12\,\overline{A}_2 &= h_0 \cos 0^\circ+h_1 \cos 30^\circ+h_2 \cos 60^\circ+ \ldots +h_{23} \cos 330^\circ,\\
12\,\overline{A}_3 &= h_0 \cos 0^\circ+h_1 \cos 45^\circ+h_2 \cos 90^\circ+ \ldots +h_{23} \cos 315^\circ,\\
&\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots;\\
12\,\overline{\overline{A}}_1 &= h_0 \sin 0^\circ+h_1 \sin 15^\circ+h_2 \sin 30^\circ+ \ldots +h_{23} \sin 345^\circ,\\
12\,\overline{\overline{A}}_2 &= h_0 \sin 0^\circ+h_1 \sin 30^\circ+h_2 \sin 60^\circ+ \ldots +h_{23} \sin 330^\circ,\\
12\,\overline{\overline{A}}_3 &= h_0 \sin 0^\circ+h_1 \sin 45^\circ+h_2 \sin 90^\circ+ \ldots +h_{23} \sin 315^\circ,\\
&\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots
\end{aligned} \qquad (23)$$

From these values of A, $\bar{A}$, we find A and α by the relations

$$A = (\bar{A}^2 + \bar{\bar{A}}^2)^{\frac{1}{2}}, \tan \alpha = -\frac{\bar{\bar{A}}}{\bar{A}}. \tag{24}$$

A° then becomes known by the equation

$$A^\circ = \arg_0 A - \alpha, \tag{25}$$

$\arg_0 A$ being known from astronomical considerations.* So for components B, C, etc.

It may be added that because the hourly heights are tabulated in solar time most of the amplitudes as brought out in the analysis must be increased by a factor a little greater than unity, known as the augmenting factor; also that most of these amplitudes must be corrected for the longitude of the moon's node by the application of a suitable factor. For series less than about a year in length still other corrections must be applied.

8. *Terms sometimes useful in describing tides.*

A *lunitidal interval* is the period of time by which the tide of any place follows after the moon's local meridian passage, at either the upper or lower transit. Lunitidal intervals are divided into separate classes by appending qualifying words, to indicate the kind of tides to which they apply; for instance, *mean high water lunitidal interval* (HWI), *mean low water lunitidal interval* (LWI), *mean tropic higher high water lunitidal interval* (HHWI), *mean tropic lower low water lunitidal interval* (LLWI), and so on as occasion may arise to designate intervals as applying to a special group or class of tides.

The tropic lunitidal intervals in Table 3 of this volume are followed by the letter *a* or *b* in order to enable one to obtain the approximate time of higher high and lower low water for any station. When the tropic interval (HHWI or LLWI) is marked *a*, add the interval to the local time of the moon's $\frac{\text{upper}}{\text{lower}}$ transit, or meridian passage, for $\frac{\text{north}}{\text{south}}$ declination of the moon; and when it is marked *b* add the interval to the local time of the moon's $\frac{\text{upper}}{\text{lower}}$ transit for $\frac{\text{south}}{\text{north}}$ declination of the moon. See formulas (32) and (33).

The establishment of the port, or vulgar establishment, as it is sometimes called, is the *mean high water full and change lunitidal interval;* that is, at the times of new and full moon.

The corrected establishment of the port is the *mean high water lunitidal interval* (HWI) for one or more lunations, and it is usually from ten to fifteen minutes less than the vulgar establishment.

The priming of the tide is the periodic acceleration of its time of occurrence, due to the sun's effect. At such times the lunitidal intervals are less than their mean, so that the tides occur earlier than the average. The priming of the tides occur during the period between new or full moon and the following quadrature, beginning and ending at a time equal to the age of the phase inequality (26) after these phases. It attains its maximum effect soon after the first and fifth octants of the moon's phase. See table of phase effects (51).

The lagging of the tide is the corresponding retardation in the time of its occurrence, the greatest effect being soon after the third and seventh octants of the moon's phase.

Mean range (Mn) is the average value of the semidaily range of tide. When the tide is chiefly diurnal, the mean range [Mn] given in table 3 of this volume is inclosed in square brackets, and denotes the average of the few small semidiurnal tides which usually occur at such stations when the moon is near the equator.

Spring range (Sg) is the greatest periodic semidaily range occurring usually one or two days after new and full moon. The time after new and full moon is the age of the phase inequality.

*The arguments for January 1 of each year from 1850 to 1950 are given upon pages 195–204, Part II, U. S. Coast and Geodetic Survey Report for 1894.

Neap range (Np) is the smallest periodic semidaily range occurring usually one or two days after the moon is in quadrature—that is, after the first and third quarters. The time after the moon's quadratures is also the age of the phase inequality.

Perigean range (Pn) is the greatest periodic semidaily range of tide occurring usually from one to three days after the moon is in perigee. The time after the moon's perigee is the age of the parallax inequality.

Apogean range (An) is the smallest periodic semidaily range occurring usually from one to three days after the moon is in apogee. The time after the moon's apogee is also the age of the parallax inequality.

Great diurnal range (Gt) is the difference between the mean of all the higher high waters (HHW) and the mean of all the lower low waters (LLW) of each day during one or more half tropical months.

Small diurnal range (Sl) is the difference between the mean of all the lower high waters (LHW) and the mean of all the higher low waters (HLW) of each day during one or more half tropical months.

Great tropic range (Gc) is the greatest periodic daily range of tide usually occurring soon after the moon is farthest north or south from the equator and therefore near one of the tropics. The time after the moon's greatest declination is the age of the diurnal inequality.

Small tropic range (Sc) is the smallest periodic daily range of tide usually occurring soon after the moon is farthest north or south from the equator and therefore near one of the tropics. The time after the moon's greatest declination is the age of the diurnal inequality.

Tides determining the above ranges, or of simultaneous occurrence, may be referred to as *spring*, *neap*, *perigean*, *tropic*, etc.; a like remark is applicable to lunitidal intervals, and occasionally to other quantities.

An *inequality* in the interval, range, or height of tide, is a systematic departure of the same from the mean value at a given station. The inequality having the period of a half synodic month is the *phase inequality;* that having an anomalistic month is the *parallax inequality;* that which has the period of a tropical month causes the two high waters or two low waters of a day to differ in height and is called the *diurnal inequality.*

The *age* of an inequality is the amount of time by which it follows its astronomical cause. The ages of the principal inequalities are given by the expressions—

$$\text{Age of phase inequality} = 0.984\,(S_2^\circ - M_2^\circ)\ \text{hours} \quad (26)$$

$$\text{Age of parallax inequality} = 1.837\,(M_2^\circ - N_2^\circ)\ \text{hours} \quad (27)$$

$$\text{Age of diurnal inequality} = 0.911\,(K_1^\circ - O_1^\circ)\ \text{hours} \quad (28)$$

where the letters are the epochs or lags (κ) of the harmonic components represented by them; their numerical values can be found in Table 4, for each of the seventy standard ports; and these ages are usually nearly constant over a considerable area. These times represent the retard of the spring and neap, the perigean and apogean, and the tropic tides, respectively, behind their astronomical causes.

Tropic diurnal inequality (HWQ, LWQ) as here used denotes the greatest periodic difference in height between two consecutive high waters or low waters, usually occurring soon after the moon is farthest north or south from the equator; this inequality is determined by the tropic tides, although the smaller inequality at some stations may not then have, even approximately, its maximum value.

Diurnal wave is that portion of the tide whose period is approximately one day, and where this wave predominates the tide is said to be chiefly *diurnal.*

Sequence of tide is the order in which the four tides of a day occur, particularly when the moon is far from the equator. It may be expressed thus, HHW to LLW or LLW to HHW

as the case may be. The $\begin{matrix}\text{former}\\\text{latter}\end{matrix}$ expression indicates that tropic LLW $\begin{matrix}\text{follows}\\\text{precedes}\end{matrix}$ tropic HHW without the lesser tides intervening. The time between tropic $\begin{matrix}\text{HHW}\\\text{LLW}\end{matrix}$ and tropic $\begin{matrix}\text{LLW}\\\text{HHW}\end{matrix}$ must be taken as less than a half lunar day. At some stations it is necessary to have both sun and moon far from the equator in order to fix the sequence.

Type of tide is the characteristic form of the tide. It is generally indicated by the sequence of tides, together with the ratios of each of the tropic diurnal inequalities, and of the spring range, to the mean range. For shallow waters, however, in rivers especially, the duration of rise or fall may become very important.

Figure 2 illustrates the tropic tides and quantities connected with them at San Francisco. In this case the tide has a large diurnal inequality in heights, the sequence is HHW to LLW, and LWQ>HWQ.

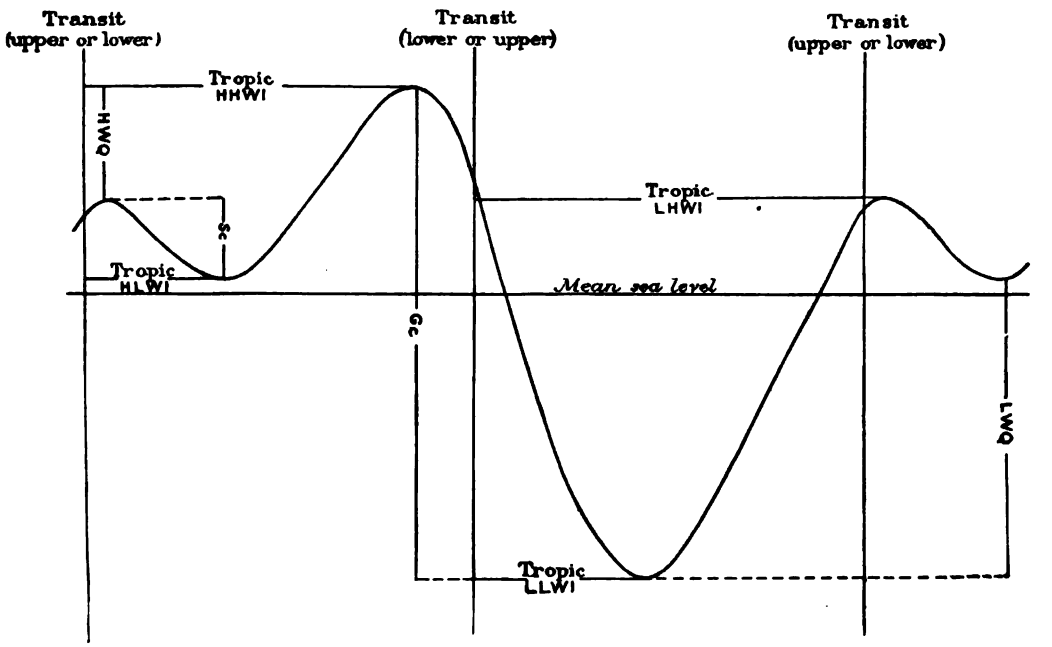

Fig. 2.

9. *Theoretical relations between the various intervals, ranges, planes of reference, etc.*

The duration of rise or fall of tide may be obtained from the following equations, adding $12^h\ 25^m$ when necessary to make the result positive.

$$\text{Duration of rise} = \text{HWI} - \text{LWI}. \tag{29}$$

$$\text{Duration of fall} = \text{LWI} - \text{HWI}. \tag{30}$$

The sum of the four tropic lunitidal intervals is equal to twice the sum of the two mean intervals, thus:

$$\text{HHWI} + \text{LHWI} + \text{HLWI} + \text{LLWI} = 2\,(\text{HWI} + \text{LWI}.) \tag{31}$$

In Table 3, of these Tide Tables, only two of the tropic intervals are given, and the other two tropic intervals may be obtained from the following approximate relations:

$$\text{Tropic LHWI} = 2\ \text{HWI} - \text{tropic HHWI}. \tag{32}$$

$$\text{Tropic HLWI} = 2\ \text{LWI} - \text{tropic LLWI}. \tag{33}$$

Some approximate height relations are given in formulas (34) to (49).

$$2\,\mathrm{Mn} = \mathrm{Sg} + \mathrm{Np} + \tfrac{1}{2}\frac{(\mathrm{Sg}-\mathrm{Np})^2}{\mathrm{Sg}+\mathrm{Np}}. \tag{34}$$

$$2\,\mathrm{Mn} = \mathrm{Gt} + \mathrm{Sl}. \tag{35}$$

$$\mathrm{Gc} - \mathrm{Sc} = \mathrm{HWQ} + \mathrm{LWQ}. \tag{36}$$

For the great diurnal range (Gt) three cases are considered:

$\mathrm{Gt} = \frac{3}{4}\mathrm{Gc} + \frac{1}{4}\,\mathrm{Mn}$, when either HWQ or LWQ (or both) exceeds $\frac{\mathrm{Mn}}{4}$. (37)

$\mathrm{Gt} = \mathrm{Mn} + \frac{1}{3}\,(\mathrm{HWQ} + \mathrm{LWQ})$, when both HWQ and LWQ are less than $\frac{\mathrm{Mn}}{4}$. (38)

$\mathrm{Gt} = 0.64\left(\mathrm{Gc} + \frac{[\mathrm{Mn}]^2}{\mathrm{Gc}}\right)$, when the tide is chiefly diurnal. (39)

For the depression of mean lower low water below mean low water three cases are considered:

$\mathrm{LW} - \mathrm{LLW} = \frac{\mathrm{LWQ}}{3} + \frac{.04\,(\mathrm{Gc}-\mathrm{Mn})^2}{\mathrm{LWQ}}$, when LWQ > HWQ, and also exceeds $\frac{\mathrm{Mn}}{4}$. (40)

$\mathrm{LW} - \mathrm{LLW} = \frac{3}{4}\,(\mathrm{Gc} - \mathrm{Mn}) - \frac{\mathrm{HWQ}}{3} - \frac{.04\,(\mathrm{Gc}-\mathrm{Mn})^2}{\mathrm{HWQ}}$, when HWQ > LWQ, and also exceeds $\frac{\mathrm{Mn}}{4}$. (41)

$\mathrm{LW} - \mathrm{LLW} = \frac{\mathrm{LWQ}}{3}$, when HWQ and LWQ are each less than $\frac{\mathrm{Mn}}{4}$. (42)

$$\mathrm{LW} - \mathrm{LLW} = \frac{\mathrm{Gt}}{\mathrm{Gc}}(\mathrm{MSL} - \mathrm{TcLLW}) - \frac{[\mathrm{Mn}]}{2}, \tag{43}$$

when the tide is chiefly diurnal. In this case mean low water and mean range are limited to the equatorial tides.

The heights of the tide are all referred to some one of the following three planes of reference: Mean low water, mean low-water springs, and mean lower low water. The definition of each plane as used in these tables is given here by an expression which indicates its depression in feet below mean sea level.

MSL—*Mean low water* $= \frac{\mathrm{Mn}}{2}$, where Mn is the mean semidiurnal range. (44)

MSL—*Mean low water springs* $= \frac{\mathrm{Sg}}{2}$, where Sg is the mean range of spring tide. (45)

MSL—*Mean lower low water* depends upon the diurnal inequalities in high and low water, and there are four cases considered:

When LWQ > HWQ, and exceeds, say, $\frac{\mathrm{Mn}}{4}$,

$$\mathrm{MSL} - \mathrm{LLW} = \frac{\mathrm{Mn}}{2} + \frac{\mathrm{LWQ}}{3} + \frac{.04\,(\mathrm{Gc}-\mathrm{Mn})^2}{\mathrm{LWQ}}; \tag{46}$$

When HWQ > LWQ, and exceeds, say, $\frac{\mathrm{Mn}}{4}$,

$$\mathrm{MSL} - \mathrm{LLW} = \frac{3\mathrm{Gc}}{4} - \frac{\mathrm{Mn}}{4} - \frac{\mathrm{HWQ}}{3} - \frac{.04\,(\mathrm{Gc}-\mathrm{Mn})^2}{\mathrm{HWQ}}; \tag{47}$$

When HWQ and LWQ are each less than about $\frac{\mathrm{Mn}}{4}$,

$$\mathrm{MSL} - \mathrm{LLW} = \frac{\mathrm{Mn}}{2} + \frac{\mathrm{LWQ}}{3}; \tag{48}$$

When the tide is chiefly diurnal,

$$\mathrm{MSL} - \mathrm{LLW} = 0.64\left(1 + \frac{[\mathrm{Mn}]^2}{\mathrm{Gc}^2}\right)(\mathrm{MSL}-\mathrm{TcLLW}) = (\mathrm{Gt} \div \mathrm{Gc})\,(\mathrm{MSL}-\mathrm{TcLLW}). \tag{49}$$

10. *The effects of the moon's parallax and phases upon the times and heights of the tides.*

The tables given below enable one to approximately take account of the effect of the moon's distance upon the range of tide, and also the variations in time and height due to the relative positions of the sun and moon.

FACTOR EXPRESSING THE EFFECT OF THE MOON'S PARALLAX UPON THE MEAN RANGE OF TIDE. (50)

Time.	Factor q.	Time.	Factor q.	Time.	Factor q.	Time.	Factor q.
After perigean tides. d.		Before apogean tides. d.		After apogean tides. d.		Before perigean tides. d.	
0	1.17	7	0.99	0	0.86	7	0.98
1	1.16	6	0.96	1	0.86	6	1.02
2	1.15	5	0.93	2	0.87	5	1.06
3	1.13	4	0.90	3	0.88	4	1.09
4	1.09	3	0.88	4	0.90	3	1.13
5	1.06	2	0.87	5	0.93	2	1.15
6	1.02	1	0.86	6	0.96	1	1.16
7	0.98	0	0.86	7	0.99	0	1.17

In making use of these tables for prediction purposes, the mean range (Mn) should be first multiplied by the factor q expressing the parallax effect; this corrected range should then be used in ascertaining the variation due to phase in the lunitidal interval and in obtaining the semirange of tide.

TABLE OF PHASE EFFECTS. (51)

Time.	Increase in lunitidal intervals.	Increase in semirange of tide.	Time.	Increase in lunitidal intervals.	Increase in semirange of tide.	Date.	Factor p.*
d. h.	m.		d. h.	m.			
After spring tides. 0 00	0 $\frac{Sg-Np}{Mn\times q}$	$+.23p(Sg-Np)$	After neap tides. 0 00	0 $\frac{Sg-Np}{Mn\times q}$	$-.29p(Sg-Np)$	Jan. 1	0.82
0 06	− 5 "	+ 23 "	0 06	+13 "	−.29 "	11	0.88
0 12	−10 "	+.23 "	0 12	+25 "	−.28 "	21	0.96
0 18	−14 "	+.22 "	0 18	+35 "	−.27 "	31	1.04
1 00	−19 "	+.21 "	1 00	+44 "	−.25 "	Feb. 10	1.13
1 06	−23 "	+.20 "	1 06	+52 "	−.23 "	20	1.20
1 12	−28 "	+.19 "	1 12	+58 "	−.21 "	Mar. 2	1.25
1 18	−32 "	+.18 "	1 18	+62 "	−.18 "	12	1.27
2 00	−37 "	+.17 "	2 00	+65 "	−.16 "	22	1.28
2 06	−41 "	+.15 "	2 06	+66 "	−.13 "	Apr. 1	1.26
2 12	−44 "	+.13 "	2 12	+67 "	−.10 "	11	1.22
2 18	−49 "	+.11 "	2 18	+67 "	−.08 "	21	1.14
3 00	−52 "	+.09 "	3 00	+66 "	−.05 "	May 1	1.06
3 06	−56 "	+.07 "	3 06	+64 "	−.02 "	11	0.96
3 12	−59 "	+.04 "	3 12	+62 "	.00 "	21	0.87
3 18	−61 "	+.02 "	3 18	+60 "	+.03 "	31	0.77
4 00	−63 "	−.01 "	4 00	+57 "	+.05 "	June 10	0.71
						20	0.67
						30	0.68
						July 10	0.74
						20	0.82
Before neap tides. 4 00	−57 "	+.05 "	Before spring tides. 4 00	+63 "	−.01 "	30	0.92
3 18	−60 "	+.03 "	3 18	+61 "	+.02 "	Aug. 9	1.01
3 12	−62 "	.00 "	3 12	+59 "	+.04 "	19	1.10
3 06	−64 "	−.02 "	3 06	+56 "	+.07 "	29	1.18
3 00	−66 "	−.05 "	3 00	+52 "	+.09 "	Sept. 8	1.23
2 18	−67 "	−.08 "	2 18	+49 "	+.11 "	18	1.26
2 12	−67 "	−.10 "	2 12	+44 "	+.13 "	28	1.26
2 06	−66 "	−.13 "	2 06	+41 "	+.15 "	Oct. 8	1.24
2 00	−65 "	−.16 "	2 00	+37 "	+.17 "	18	1.20
1 18	−62 "	−.18 "	1 18	+32 "	+.18 "	28	1.14
1 12	−58 "	−.21 "	1 12	+28 "	+.19 "	Nov. 7	1.06
1 06	−52 "	−.23 "	1 06	+23 "	+.20 "	17	0.97
1 00	−44 "	−.25 "	1 00	+19 "	+.21 "	27	0.89
0 18	−35 "	−.27 "	0 18	+14 "	+.22 "	Dec. 7	0.83
0 12	−25 "	−.28 "	0 12	+10 "	+.23 "	17	0.79
0 06	−13 "	−.29 "	0 06	+ 5 "	+.23 "	27	0.80
0 00	0 "	−.29 "	0 00	0 "	+.23 "	Jan. 6	0.85

*The factor p applies to the "increase in the semirange of tide," and not to the "increase in lunitidal intervals." It is due to the declinations of the sun and moon and to the solar parallax.

In the column headed "Increase in lunitidal intervals" the negative values are often spoken of as the *priming* and the positive ones as the *lagging* of the tide, § 8.

The *vulgar establishment*, being the interval at "full and change," may be obtained from the mean lunitidal interval by entering this table as many hours before spring tides as are contained in the age of the phase inequality, § 8, formula (26).

11. *Tidal currents.*

The *velocity* (*drift*) of a current is the rate at which the fluid particles move horizontally. It is usually expressed in knots, i. e., nautical miles per hour, but sometimes in feet per second. The velocity generally differs for different depths, but its value at the surface may be understood unless otherwise specified. The velocity of propagation of the tidal wave is many times greater than the velocity of the current, and the two must not be confounded.

The *direction* (*set*) of a current is the direction or point of the compass toward which the fluid particles move.

The movement of the fluid in one direction, usually inland, is styled *flood*, and in the opposite direction, *ebb*. The two are not always distinct, and, even if they are, it is not always possible to know which movement should be taken for the flood and which for the ebb.

Slack water denotes the state of the current when its velocity becomes a minimum.

The effect of the tidal wave in giving rise to currents may be seen in two simple cases:

(1) Where there is a small tidal basin connected with the sea by a large opening.

(2) Where there is a large tidal basin connected with the sea by a very small opening.

In the first case the velocity of the current in the opening will have its maximum value when the height of the tide within is changing most rapidly, i. e., at a time about midway between high and low water. The water in the basin keeps at approximately the same level as that of the water outside. Flood corresponds to the rising, and ebb to the falling tide within. E. g. the Golden Gate, Cal.

In the second case the velocity of the current in the opening will have its maximum value when it is high water or low water without; for then there is the greatest head of water for producing motion. Flood begins about three hours after low water, ebb about three hours after high water; that is, slack water occurs at times about midway between the tides.

In an unobstructed wave, the flood velocity is a maximum at about the time of high water, and the ebb velocity becomes a maximum near the time of low water.

In a stationary wave, the slack waters are almost simultaneous with the high and low waters.

In some bodies of water, particularly long channels, such as tidal rivers, the directions of the currents are obviously governed by the trend of the banks; but in broader bodies, especially near the heads of gulfs and bays, the directions taken by the particles of water are not easily explained. It is quite common in such cases to find no true slack water, while the direction of the current shifts continually with the varying phases of the tide.

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INSTRUCTIONS TO MARINERS IN CASE OF SHIPWRECK.*

GENERAL INFORMATION.

Life-saving stations and houses of refuge are located upon the Atlantic and Pacific seaboard of the United States, the Gulf of Mexico, and the Lake coasts.

All life-saving stations on the Atlantic coast from the eastern extremity of the State of Maine to Sullivan Island, South Carolina, are manned annually by crews of experienced surfmen from the 1st of August to the 31st of May following, inclusive. Upon the Pacific coast they are opened and manned the year round.

All life-saving stations are fully supplied with boats, wreck guns, beach apparatus, restoratives, etc.

Houses of refuge are located exclusively upon the Florida coast, where the requirements of relief are widely different from those of any other portion of the seaboard.

Houses of refuge are supplied with boats, provisions, and restoratives, but not manned by crews; a keeper, however, resides in each throughout the year, who, after every storm, is required to make extended excursions along the coast, with a view of ascertaining if any shipwreck has occurred and finding and succoring any persons that may have been cast ashore.

All life-saving stations are provided with the International Code of Signals, and vessels can, by opening communication, be reported; obtain the latitude and longitude of the station, where determined; information as to the weather probabilities in most cases; or, if crippled or disabled, a steam tug or revenue cutter will, if requested, be telegraphed for to the nearest port, where facilities for telegraphing exist.

All services are performed by the life-saving crews without other compensation than their wages from the Government.

Destitute seafarers are provided with food and lodgings at the nearest station by the Government as long as necessarily detained by the circumstances of shipwreck.

The station crews patrol the beach from 2 to 4 miles each side of their stations between sunset and sunrise, and if the weather is foggy the patrol is continued through the day.

Each patrolman carries Coston signals. Upon discovering a vessel standing into danger he ignites one of them, which emits a brilliant red flame of about two minutes' duration, to warn her off, or, should the vessel be ashore, to let her crew know that they are discovered and assistance is at hand.

If the vessel is not discovered by the patrol immediately after striking, rockets or flare-up lights should be burned; or, if the weather be foggy, guns should be fired to attract attention, as the patrolman may be some distance away at the other end of his beat.

Masters are particularly cautioned, if they should be driven ashore anywhere in the neighborhood of the stations, especially on any of the sandy coasts where there is not much danger of vessels breaking up immediately, to remain on board until assistance arrives, and under no circumstances should they attempt to land through the surf in their own boats until the last hope of assistance from the shore has vanished. Often when comparatively smooth at sea a dangerous surf is running which is not perceptible 400 yards offshore, and the surf when viewed from a vessel never appears as dangerous as it is. Many lives have unnecessarily been lost by the crews of stranded vessels being thus deceived and attempting to land in the ship's boats.

The difficulties of rescue by operations from the shore are greatly increased in cases where the anchors are let go *after entering the breakers*, as is frequently done, and the chances of saving life correspondingly lessened.

INSTRUCTIONS.

RESCUE WITH THE LIFEBOAT OR SURFBOAT.

The patrolman, after discovering your vessel ashore and burning a Coston signal, hastens to his station for assistance. If the use of a boat is practicable, either the large lifeboat is launched from its ways in the station and proceeds to the wreck by water, or the lighter surfboat is hauled overland to a point opposite the wreck and launched, as circumstances may require.

Upon the boat reaching your vessel, the directions and orders of the keeper (who always commands and steers the boat) should be implicitly obeyed. Any headlong rushing and crowding should be prevented, and the captain of the vessel should remain on board, to preserve order, until every other person has left.

Women, children, helpless persons, and passengers should be passed into the boat first.

Goods or baggage will positively not be taken into the boat until all are landed. If any be passed in against the keeper's remonstrance, he is fully authorized to throw the same overboard.

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*This account is reproduced from the publications of the United States Life-Saving Service.

RESCUE WITH THE BREECHES BUOY OR LIFE CAR.

Should it be inexpedient to use either the lifeboat or surfboat, recourse will be had to the wreck gun and beach apparatus for the rescue by the breeches buoy or the life car.

A shot with a small line attached will be fired across your vessel.

Get hold of the line as soon as possible and haul on board until you get a tail block with a whip or endless line rove through it. This tail block should be hauled on board as quickly as possible to prevent the whip drifting off with the set or fouling with wreckage, etc. Therefore, if you have been driven into the rigging,

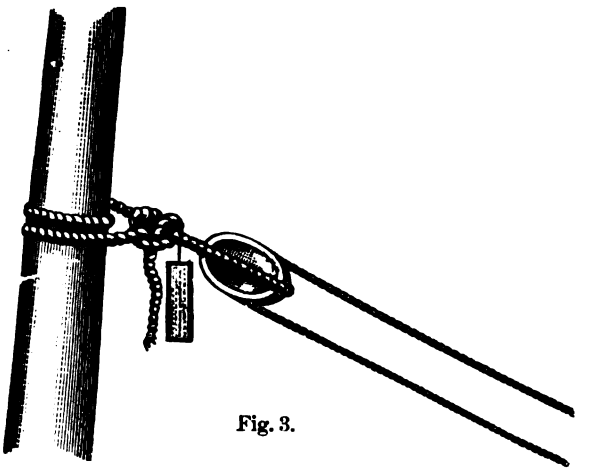

Fig. 3.

where but one or two men can work to advantage, cut the shot line and run it through some available block, such as the throat or peak halyards block, or any block which will afford a clear lead, or even between the ratlines, that as many as possible may assist in hauling.

Attached to the tail block will be a tally board, with the following directions in English on one side and French on the other:

"Make the tail of the block fast to the lower mast, well up. If the masts are gone, then to the best place you can find. Cast off shot line, see that the rope in the block runs free, and show signal to the shore."

The above instructions being complied with, the result will be as shown in fig. 3 above.

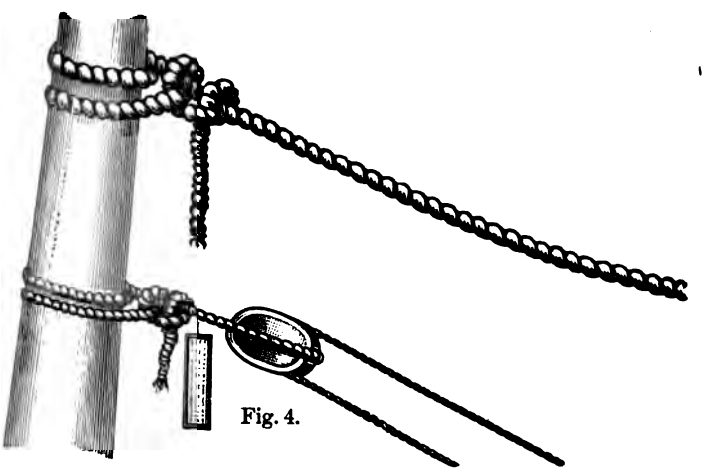

Fig. 4.

As soon as your signal is seen, a 3-inch hawser will be bent on to the whip and hauled off to your ship by the life-saving crew.

If circumstances will admit, you can assist the life-saving crew by manning that part of the whip to which the hawser is bent and hauling with them.

When the end of the hawser is got on board, a tally board will be found attached, bearing the following directions in English on one side and French on the other:

"Make this hawser fast about 2 feet above the tail block; see all clear and that the rope in the block runs free, and show signal to the shore."

These instructions being obeyed, the result will be as shown in fig. 4.

Take particular care that there are no turns of the whip line around the hawser. To prevent this, take the end of the hawser UP BETWEEN *the parts of the whip before making it fast.*

When the hawser is made fast, the whip cast off from the hawser, and your signal seen by the life-saving crew, they will haul the hawser taut and by means of the whip will haul off to your ship a breeches buoy suspended from a traveler block, or a life car from rings, running on the hawser.

Fig. 5, below, represents the apparatus rigged, with the breeches buoy hauled off to the ship.

If the breeches buoy be sent, let one man immediately get into it, thrusting his legs through the breeches. If the life car, remove the hatch, place as many persons into it as it will hold (four to six), and secure the hatch on the outside by the hatch bar and hook, signal as before, and the buoy or car will be hauled ashore. This will be repeated until all are landed. On the last trip of the life car the hatch must be secured by the inside hatch bar.

In many instances two men can be landed in the breeches buoy at the same time by each putting a leg through a leg of the breeches and holding on to the lifts of the buoy.

Children, when brought ashore by the buoy, should be in the arms of older persons or securely lashed to the buoy. Women and children should be landed first.

In signaling as directed in the foregoing instructions, if in the daytime, let one man separate himself from the rest and swing his hat, a handkerchief, or his hand; if at night, the showing of a light and concealing it once or twice, will be understood; and like signals will be made from the shore.

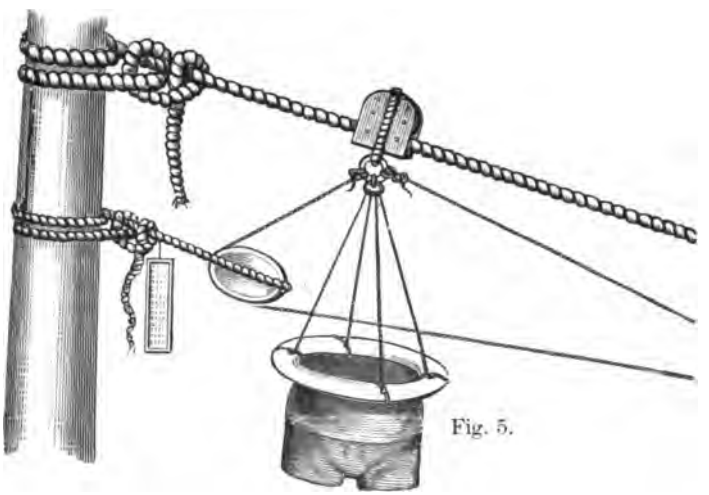

Fig. 5.

Circumstances may arise, owing to the strength of the current or set, or the danger of the wreck breaking up immediately, when it would be impossible to send off the hawser. In such a case a breeches buoy or life car will be hauled off instead by the whip, or sent off to you by the shot line, and you will be hauled ashore through the surf.

If your vessel is stranded during the night and discovered by the patrolman, which you will know by his burning a brilliant red light, keep a sharp lookout for signs of the arrival of the life-saving crew abreast of your vessel.

From one to four hours may intervene between the burning of the light and their arrival, as the patrolman will have to return to his station, perhaps 3 or 4 miles distant, and the life-saving crew draw the apparatus or surfboat through the sand or over bad roads to where your vessel is stranded.

Lights on the beach will indicate their arrival, and the sound of cannon firing from the shore may be taken as evidence that a line has been fired across your vessel. Therefore, upon hearing the cannon, make strict search aloft, fore and aft, for the shot line, for it is almost certain to be there. Though the movements of the life-saving crew may not be perceptible to you, owing to the darkness, your ship will be a good mark for the men experienced in the use of the wreck gun, and the first shot seldom fails.

SIGNALS.

The following signals, approved by the International Marine Conference convened at Washington in October, 1889, have been adopted by the Life-Saving Service, and will be used and recognized by the officers and employees as occasion may require:

"Upon the discovery of a wreck by night, the life-saving force will burn a red pyrotechnic light or a red rocket to signify—'You are seen; assistance will be given as soon as possible.'

"A red flag waved on shore by day, or a red light, red rocket, or red Roman candle displayed by night, will signify—'Haul away.'

"A white flag waved on shore by day, or a white light slowly swung back and forth, or a white rocket, or white Roman candle fired at night, will signify—'Slack away.'

"Two flags, a white and a red, waved at the same time on shore by day, or two lights, a white and a red, slowly swung at the same time, or a blue pyrotechnic light burned by night, will signify—'Do not attempt to land in your own boats. It is impossible.'

"A man on shore beckoning by day, or two torches burning near together by night, will signify—'This is the best place to land.'

"Any of these signals may be answered from the vessel as follows: In the daytime, by waving a flag, a handkerchief, a hat, or even the hand; at night, by firing a rocket, a blue light, or a gun, or by showing a light over the ship's gunwale for a short time, and then concealing it."

RECAPITULATION.

Remain by the wreck until assistance arrives from the shore, unless your vessel shows signs of immediately breaking up.

If not discovered immediately by the patrol, burn rockets, flare-up or other lights; or, if the weather be foggy, fire guns.

Take particular care that there are no turns of the whip line around the hawser before making the hawser fast.

Send the women, children, helpless persons, and passengers ashore first.

Make yourself thoroughly familiar with these instructions, and remember that on your coolness and strict attention to them will greatly depend the chances of success in bringing you and your people safely to land.

*Restoring the apparently drowned.**

NOTE.—These directions differ from those given in the last revision of the Regulations by the addition of means for securing deeper inspiration. The method heretofore published, known as the Howard, or Direct Method, has been productive of excellent results in the practice of the Service, and is retained here. It is, however, here arranged for practice in combination with the Sylvester method, the latter producing deeper inspiration than any other known method, while the former effects the most complete expiration. The

Fig. 6.

combination, therefore, tends to produce the most rapid oxygenation of the blood—the real object to be gained. The combination is prepared primarily for the use of life-saving crews where assistants are at hand. A modification of Rule III, however, is published as a guide in cases where no assistants are at hand and one person is compelled to act alone.

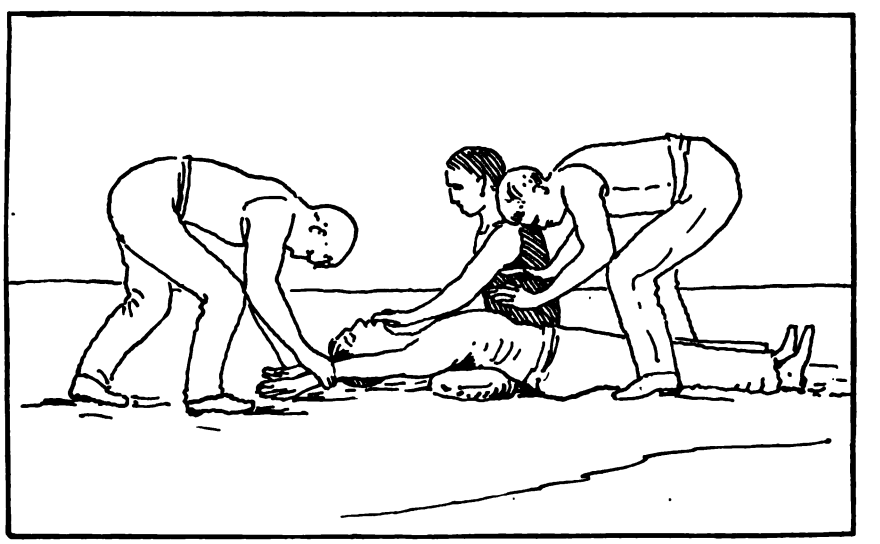

Fig. 7.

RULE I. *Arouse the patient.*—Do not move the patient unless in danger of freezing; instantly expose the face to the air, toward the wind if there be any; wipe dry the mouth and nostrils; rip the clothing so as to expose the chest and waist; give two or three quick, smarting slaps on the chest with the open hand.

*From the directions of the United States Life-Saving Service.

If the patient does not revive proceed immediately as follows:

RULE II. *To expel water from the stomach and chest* (see fig. 6).—Separate the jaws and keep them apart by placing between the teeth a cork or small bit of wood; turn the patient on his face, a large bundle of tightly rolled clothing being placed beneath the stomach; press heavily on the back over it for half a minute, or as long as fluids flow freely from the mouth.

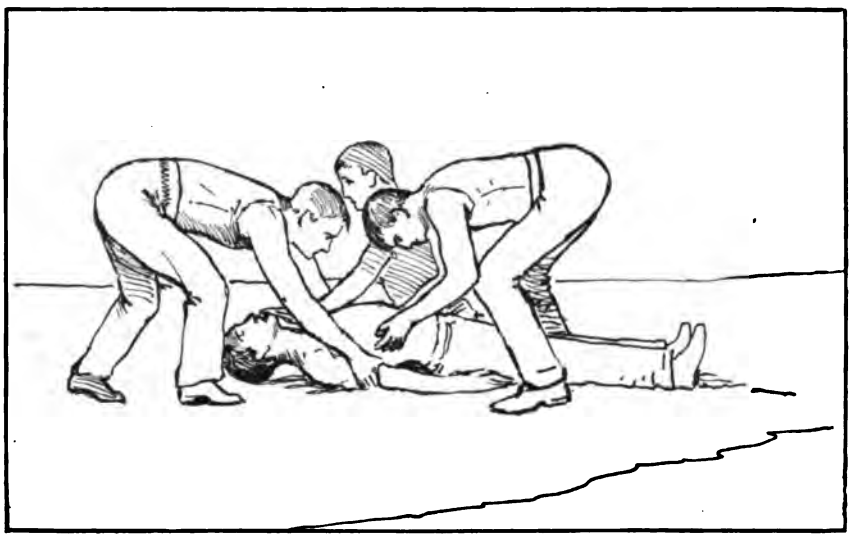

Fig. 8.

RULE III. *To produce breathing* (see figs. 7 and 8).—Clear the mouth and throat of mucus by introducing into the throat the corner of a handkerchief wrapped closely around the forefinger; turn the patient on the back, the roll of clothing being so placed as to raise the pit of the stomach above the level of the rest of the body. Let an assistant with a handkerchief or piece of dry cloth draw the tip of the tongue out of one corner of the mouth (which prevents the tongue from falling back and choking the entrance to the windpipe), and

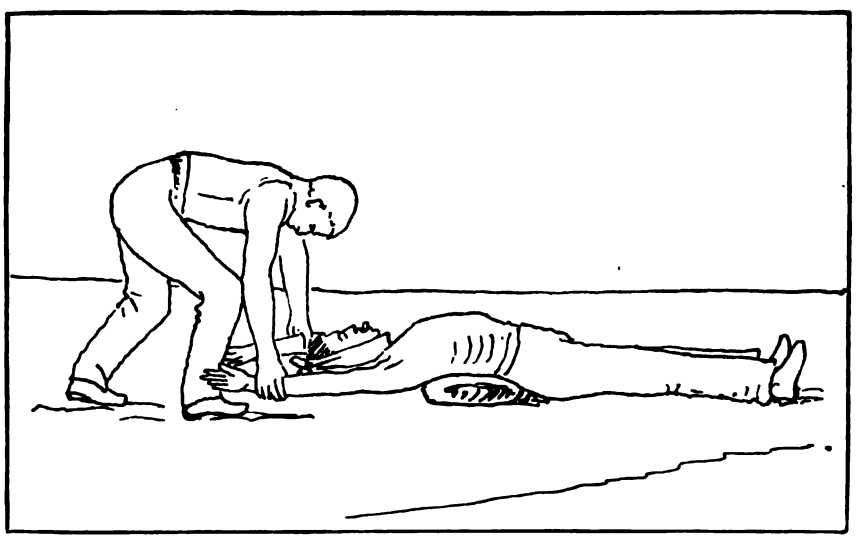

Fig. 9.

keep it projecting a little beyond the lips. Let another assistant grasp the arms just below the elbows and draw them steadily upward by the sides of the patient's head to the ground, the hands nearly meeting (which enlarges the capacity of the chest and induces inspiration). (Fig. 7.) While this is being done let a third assistant take position astride the patient's hips with his elbows resting upon his own knees, his hands extended ready for action. Next, let the assistant standing at the head turn down the patient's arms to

the sides of the body, the assistant holding the tongue, changing hands if necessary* to let the arms pass. Just before the patient's hands reach the ground the man astride the body will grasp the body with his hands, the balls of the thumbs resting on either side of the pit of the stomach, the fingers falling into the grooves between the short ribs. Now, using his knees as a pivot, he will at the moment the patient's hands touch the ground throw (not too suddenly) all his weight forward on his hands, and at the same time squeeze the waist between them as if he wished to force anything in the chest upward out of the mouth; he will deepen the pressure while he slowly counts one, two, three, four (about five seconds), then suddenly let go with a final push, which will spring him back to his first position.† This completes expiration. (Fig. 8.)

At the instant of his letting go, the man at the patient's head will again draw the arms steadily upward to the sides of the patient's head as before (the assistant holding the tongue again, changing hands to let the arms pass if necessary), holding them there while he slowly counts one, two, three, four (about five seconds).

Repeat these movements deliberately and perseveringly twelve to fifteen times in every minute—thus imitating the natural motions of breathing.

If natural breathing be not restored after a trial of the bellows movement for the space of about four minutes, then turn the patient a second time on the stomach, as directed in Rule II, rolling the body in the opposite direction from that which it was first turned, for the purpose of freeing the air passage from any remaining water. Continue the artificial respiration from one to four hours, or until the patient breathes, according to Rule III; and for a while, after the appearance of returning life, carefully aid the first short gasps

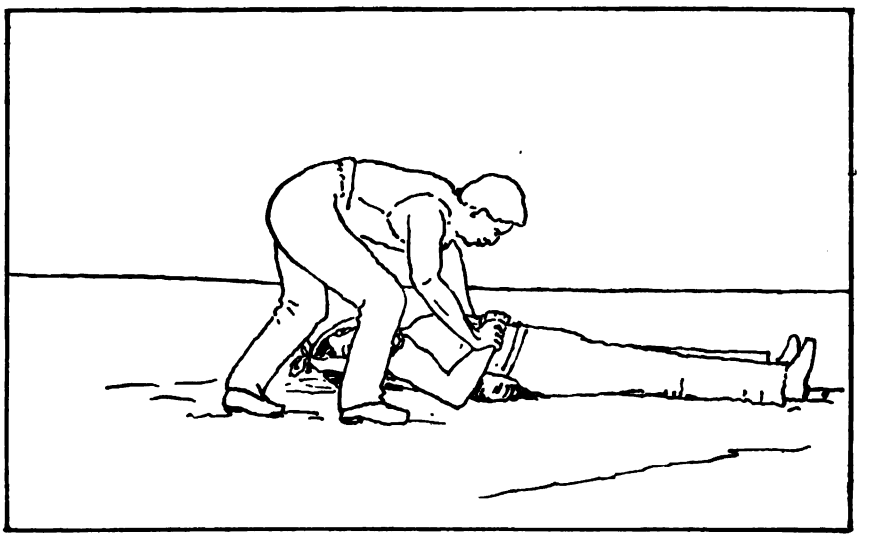

Fig. 10.

until deepened into full breaths. Continue the drying and rubbing, which should have been unceasingly practiced from the beginning by assistants, taking care not to interfere with the means employed to produce breathing. Thus the limbs of the patient should be rubbed, always in an upward direction toward the body, with firm-grasping pressure and energy, using the bare hands, dry flannels, or handkerchiefs, and continuing the friction under the blankets or over the dry clothing. The warmth of the body can also be promoted by the application of hot flannels to the stomach and armpits, bottles or bladders of hot water, heated bricks, etc., to the limbs and soles of the feet.

RULE IV. AFTER-TREATMENT.—*Externally:* As soon as breathing is established let the patient be stripped of all wet clothing, wrapped in blankets only, put to bed comfortably warm, but with a free circulation of fresh air, and left to perfect rest. *Internally:* Give whisky or brandy and hot water in doses of a teaspoonful to a tablespoonful, according to the weight of the patient, or other stimulant at hand, every ten or fifteen minutes for the first hour, and as often thereafter as may seem expedient. *Later manifestations:* After reaction is fully established, there is great danger of congestion of the lungs, and if perfect rest is not maintained for at least forty-eight hours it sometimes occurs that the patient is seized with great difficulty of breathing, and death is liable to follow unless immediate relief is afforded. In such cases apply a large mustard plaster over the breast. If the patient gasps for breath before the mustard takes effect assist the breathing by carefully repeating the artificial respiration.

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*Changing hands will be found unnecessary after some practice; the tongue, however, must not be released.

†A child or very delicate patient must of course be more gently handled.

MODIFICATION OF RULE III.

[To be used after Rules I and II in case no assistance is at hand.]

To produce respiration.—If no assistance is at hand, and one person must work alone, place the patient on his back with the shoulders slightly raised on a folded article of clothing; draw forward the tongue and keep it projecting just beyond the lips; if the lower jaw be lifted the teeth may be made to hold the tongue in place; it may be necessary to retain the tongue by passing a handkerchief under the chin and tying it over the head.

Grasp the arms just below the elbows and draw them steadily upward by the sides of the patient's head to the ground, the hands nearly meeting. (See fig. 9.)

Next lower the arms to the sides and press firmly downward and inward on the sides and front of the chest over the lower ribs, drawing toward the patient's head. (See fig. 10.)

Repeat these movements twelve to fifteen times every minute, etc.

Instructions for saving drowning persons by swimming to their relief.

When you approach a person drowning in the water assure him, with a loud and firm voice, that he is safe.

Before jumping in to save him, divest yourself as far and as quickly as possible of all clothes; tear them off if necessary; but if there is not time, loose at all events the foot of your drawers, if they are tied, as, if you do not do so, they fill with water and drag you.

On swimming to a person in the sea, if he be struggling do not seize him then, but keep off for a few seconds till he gets quiet, for it is sheer madness to take hold of a man when he is struggling in the water, and if you do you run a great risk.

Then get close to him and take fast hold of the hair of his head, turn him as quickly as possible onto his back, give him a sudden pull, and this will cause him to float, then throw yourself on your back also and swim for the shore, both hands having hold of his hair, you on your back and he also on his, and of course his back to your stomach. In this way you will get sooner and safer ashore than by any other means, and you can easily thus swim with two or three persons; the writer has even, as an experiment, done it with four, and gone with them 40 or 50 yards in the sea. One great advantage of this method is that it enables you to keep your head up and also to hold the person's head up you are trying to save. It is of primary importance that you take fast hold of the hair and throw both the person and yourself on your backs. After many experiments, it is usually found preferable to all other methods. You can in this manner float nearly as long as you please, or until a boat or other help can be obtained.

It is believed there is no such thing as a *death grasp;* at least it is very unusual to witness it. As soon as a drowning man begins to get feeble and to lose his recollection, he gradually slackens his hold until he quits it altogether. No apprehension need, therefore, be felt on that head when attempting to rescue a drowning person.

After a person has sunk to the bottom, if the water be smooth, the exact position where the body lies may be known by the air bubbles, which will occasionally rise to the surface, allowance being of course made for the motion of the water, if in a tideway or stream, which will have carried the bubbles out of a perpendicular course in rising to the surface. Oftentimes a body may be regained from the bottom, before too late for recovery, by diving for it in the direction indicated by these bubbles.

On rescuing a person by diving to the bottom, the hair of the head should be seized by one hand only, and the other used in conjunction with the feet in raising yourself and the drowning person to the surface.

If in the sea, it may sometimes be a great error to try to get to land. If there be a strong "outsetting" tide, and you are swimming either by yourself or having hold of a person who can not swim, then get on your back and float till help comes. Many a man exhausts himself by stemming the billows for the shore on a back-going tide, and sinks in the effort, when, if he had floated, a boat or other aid might have been obtained.

These instructions apply alike to all circumstances, whether as regards the roughest sea or smooth water.

Treatment of frostbites.

[As recommended by the Surgeon-General of Public Health and Marine-Hospital Service.]

Do not bring the patient to the fire, nor bathe the parts in warm water.

If snow be on the ground, or accessible, take a woolen cloth in the hand, place a handful of snow upon it, and gently rub the frozen part until the natural color is restored. In case snow is not at hand, bathe the part gently with a woolen cloth in the coldest *fresh* water obtainable—ice water if practicable.

In case the frostbite is old, and the skin is turned black or begun to scale off, do not attempt to restore its vitality by friction, but apply carron oil on a little cotton; after which wrap the part loosely in flannel.

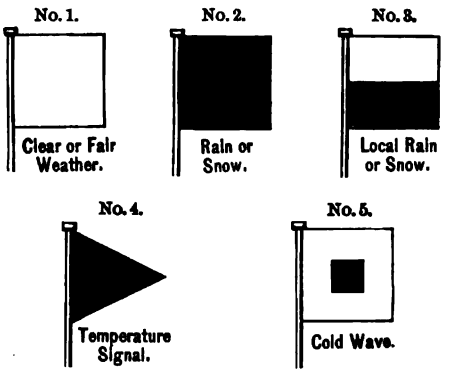
In all cases, as soon as the vitality has been restored, apply the carron oil, prepared according to Service formula.* As it contains opium, do not administer morphia or other opiate.

In the case of a person apparently dead from exposure to cold, friction should be applied to the body and the lower extremities, and artificial respiration practiced as in cases of the apparently drowned. As soon as the circulation appears to be restored, administer spirits and water at intervals of fifteen or twenty minutes until the flesh feels natural. Even if no signs of life appear, friction should be kept up for a long period, as instances are on record of recovery after several hours of suspended animation.

*The Service formula for *carron oil* is to mix 12 parts olive oil, or raw linseed oil, with 12 parts of lime-water, and 1 part tincture of opium.

STORM, WIND-DIRECTION, AND INFORMATION SIGNALS OF THE UNITED STATES WEATHER BUREAU.

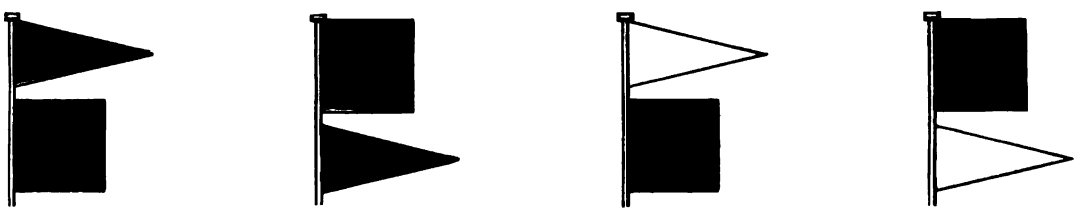
WEATHER AND TEMPERATURE SIGNALS, AND INTERPRETATION OF DISPLAYS.



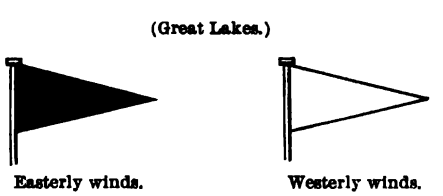
No. 1, alone, indicates fair weather, stationary temperature.
No. 2, alone, indicates rain or snow, stationary temperature.
No. 3, alone, indicates local rain or snow, stationary temperature.
No. 1, with No. 4 above it, indicates fair weather, warmer.
No. 1, with No. 4 below it, indicates fair weather, colder.
No. 2, with No. 4 above it, indicates rain or snow, warmer.
No. 2, with No. 4 below it, indicates rain or snow, colder.
No. 3, with No. 4 above it, indicates local rain or snow, warmer.
No. 3, with No. 4 below it, indicates local rain or snow, colder.
No. 1, with No. 5, indicates fair weather, cold wave.
No. 2, with No. 5, indicates wet weather, cold wave.

WIND SIGNALS FOR THE BENEFIT OF MARINE INTERESTS.

STORM SIGNALS.



INFORMATION SIGNALS.



HURRICANE SIGNAL.

EXPLANATION.

Storm signal.—A red flag with a black center indicates that a storm of marked violence is expected.

The pennants displayed with the flags indicate the direction of the wind: Red, easterly (from northeast to south); white, westerly (from southwest to north). The pennant above the flag indicates that the wind is expected to blow from the northerly quadrants; below, from southerly quadrants.

By night a red light indicates easterly winds, and a white light above a red light westerly winds.

Information signal.—Red or white pennant displayed alone. When displayed at stations on the Great Lakes, indicates that winds are expected which may prove dangerous to tows and smaller classes of vessels, the red pennant indicating easterly, and the white pennant westerly, winds.

When displayed at stations on the Atlantic, Pacific, and Gulf coasts, indicates that the local observer has received information from the Central Office of a storm covering a limited area, dangerous only for vessels about to sail to certain points, and serves as a notification to shipmasters that information will be given them upon application to the local observer. Only the red pennant is displayed on the coasts.

Hurricane signal.—Two red flags with black centers, displayed one above the other, indicate the expected approach of tropical hurricanes, and also of those extremely severe and dangerous storms which occasionally move across the Lakes and north Atlantic coast.

No night information of hurricane signals is displayed.

EXPLANATION OF TABLES.

In attempting to extend the tide tables to all waters, the Survey has utilized information from a variety of foreign sources. The chief of these are: The Proceedings of the Royal Society of London, 1885, 1889, 1902; Reports on the Operations of the Survey of India Department; the British, German, French, and other tide tables; observations and results furnished to the Survey through our foreign consulates; observations loaned on special requests, and voluntary contributions from several hydrographic surveys. See acknowledgments in Preface.

Table 1, pages 53–332.—This table gives full predictions, that is, tabulated high and low waters for each day of the year, for seventy stations. They have been made by means of the Ferrel tide-predicting machine described in Appendix 10 of the Superintendent's Report for 1883, and a new tide-computing machine, devised and constructed at this office, a description of which will be published later. The harmonic constants underlying these predictions are given in Table 4, where will also be found the lengths of the series of observations analyzed.

A note at the bottom of each page shows the kind of time used and the plane from which the heights are reckoned.

For convenience, the phases of the moon, together with the times of its extreme distances and declinations, are given in connection with the calendar of each station. More exact values will be found in Tables 7 and 8.

Table 2, pages 333–337.—The first three pages of this table afford a ready means of finding the approximate height of the tide at any intermediate time between high and low water for those ports on the Atlantic coast of the United States for which full predictions are given. This table may be extended to the subordinate stations (given in Table 3) referred to these principal stations by multiplying its values by the ratio of mean ranges, provided the duration of rise or fall is sensibly the same at the subordinate as at the principal station. Tables 2A and 2B have been so designated in order to avoid changing the number of the tables which follow. Table 2A is an auxiliary table by means of which Table 2B may be adapted to almost any kind of tide, whether semidiurnal or diurnal. It is believed that these tables will be found more satisfactory than any general tables which have ever been published heretofore for finding the height between the times of high and low water.

Table 3, pages 338–457.—This table gives the following items:

First. A list of about 3,000 tidal stations arranged in geographic order; the names of the seventy stations of Table 1 are printed in small capitals.

Second. Their approximate geographic position. If we put S and L for the west longitudes in time of the standard time and local meridians, respectively, we have the following:

$$\text{The correction to change standard to local time} = S - L. \quad (52)$$

$$\text{The correction to change local to standard time} = L - S. \quad (53)$$

For east longitude reverse the signs in equations (52) and (53).

Third. The standard or principal port to which they are referred.

Fourth. The differences and ratios to be applied to the predicted times and heights of the principal port, Table 1, for obtaining the tides at any given subordinate port. The tides so obtained are already expressed in the kind of time given in connection with these differences.

The time differences are computed as follows:

Diff. for time of HW $=(\mathrm{HWI})_{,,}-(\mathrm{HWI})_{,}+S_{,}-S_{,,}+1.035\ (L_{,,}-L_{,})+n\ (12^{h}\ 25^{m})$. (54)

Diff. for time of LW $=(\mathrm{LWI})_{,,}-(\mathrm{LWI})_{,}+S_{,}-S_{,,}+1.035\ (L_{,,}-L_{,})+n\ (12^{h}\ 25^{m})$. (55)

L=the west longitude of the station in time.

S=the west longitude of the time meridian used.

$n=0$ when the corresponding tropic intervals at both stations are marked with the same letter.

$n=\pm 1$ when the corresponding tropic intervals at the two stations are marked with different letters, the sign giving the smaller result being usually preferred.

$n=\pm 2$ when the tide is chiefly diurnal, and it is desired to change the sign of the direct difference; also when the two stations are situated upon opposite sides of the day-line in the Pacific Ocean, and it is desired to refer the tide to the same nominal day at both stations.

Single subscripts refer to the principal station, and double subscripts to the subordinate station.

For east longitude reverse the signs of S and L.

Sometimes when the corresponding height inequalities are small the markings of the tropic intervals at the two stations are ignored in computing the time difference. For stations where the tide is chiefly diurnal the tropic intervals are compared to get the time differences. If the Russian calendar is desired for Siberian or other stations, subtract thirteen days from the dates given by application of the differences.

If the subordinate station is properly referred, the times of high and low water ought to be correctly given by means of the tidal differences, and in the kind of time indicated in these columns, without regard to the time used for the standard port.

The height differences are computed as follows:

Difference for height of HW $=[D_{,,}+\frac{1}{2}\ (\mathrm{Mn})_{,,}]-[D_{,}+\frac{1}{2}\ (\mathrm{Mn})_{,}]$ (56)

Difference for height of LW $=[D_{,,}-\frac{1}{2}\ (\mathrm{Mn})_{,,}]-[D_{,}-\frac{1}{2}\ (\mathrm{Mn})_{,}]$ (57)

where $D_{,}$ and $D_{,,}$ are the depressions below mean sea level of the planes of reference at the standard and subordinate ports, respectively, as given in Table 3.

The heights of the tides are referred to one of three planes of reference: Mean low water, mean lower low water, and mean low water springs, § 9, formulas (44) to (49).

The differences may be used without material error only when the ratio of ranges is not far from unity. The heights thus obtained are reckoned from the plane of reference indicated in the difference columns, no matter what plane has been used for the predictions at the standard port. The approximate depression of this plane below mean sea level is given on the opposite page, in the third column from the last.

In no case should the height differences be used, except for very rough results, where the ratio of ranges differs as much as 25 per cent from unity. A much better estimate of the heights at the subordinate station can always be obtained by using the formula

$$h_{,,}=r\ h_{,}+D_{,,}-r\ D_{,} \qquad (58)$$

in which $D_{,}$ and $D_{,,}$ are the same as before, $h_{,}$ and $h_{,,}$ are the heights of the tide at the standard and the subordinate ports, respectively, and r is the ratio of ranges. When both stations are referred to mean low water or to mean low water springs, $D_{,,}-r\ D_{,}$ may be neglected, and the formula becomes $h_{,,}=r\ h_{,}$. (59)

Fifth. Lunitidal intervals, mean and tropic. See introduction, §§ 1, 8, 9, and 10. The tropic lunitidal intervals marked *a* are to be added to the time of the moon's upper transit for north declination, and to the lower transit for south declination of the moon; those intervals marked *b* are to be added to the time of the moon's upper transit for south declination, and to the lower transit for north declination of the moon. It is to be noted that the values given

are for tropic higher high and lower low water, and not for the tropic lower high and higher low water. To obtain such an interval approximately, change the letters a and b and find an interval as much greater than the mean interval as the given tropic interval is less. See formulas (32) and (33).

Sixth. Ranges of tide: Mean, spring, neap, and great tropic. See introduction, §§ 8, 9, and 10. In some localities the tide is chiefly diurnal—that is, usually only one high and one low water occur in twenty-four hours; for such places the columns for mean intervals and ranges are either left vacant, or else the given values have been inclosed in brackets. The bracketed values are for the semidiurnal part of the tide, and generally occur in nature only for a day or two while the moon is near the equator.

Seventh. Tropic diurnal inequalities in height. See introduction, § 8.

Eighth. Tropic range and interval of the diurnal portion of the tide. The interval is reckoned from an upper north or a lower south transit. It is hoped that the interval column, now largely vacant, may eventually be filled out, thus enabling one to trace the progress of the diurnal wave over the earth's surface.

Ninth. The position of the plane of predictions and of the tropic lower low water with respect to mean sea level. The former is of use in comparisons between observations and the predictions which are obtained by applying the differences for heights, as the local mean sea level can be approximately determined from a few readings of the tide staff. The latter, in connection with the data given in the other columns, enables one to construct a type curve for the locality similar to that given in paragraph 8.

Tenth. The variation of the compass.

Items here numbered five to nine (i. e., the right-hand page of Table 3) are intended for such nonharmonic quantities as best describe the tide, showing its character, magnitude, relation to the moon's transits and to mean sea level. See Fig. 2, § 8 in introduction. The tidal differences and ratios are dependent upon these quantities.

This table is at present very imperfect, owing to a want of properly distributed observations upon which to base conclusions and to a want of time in which to utilize the observations already at hand. Improved values will be substituted from year to year wherever the present ones may prove to be erroneous, and all persons are urged to send information for correcting these Tide Tables to the Superintendent, Coast and Geodetic Survey, Washington, D. C., U. S. A.

Table 4, pages 458–461.—This table gives the amplitudes and epochs of the harmonic constants used in making the predictions for the principal tidal stations, together with the lengths of the series of observations used in their determination and the sources from which they were obtained.

Table 5, pages 462–463.—This table gives the variations in mean sea level due to the annual and semiannual components for such of the ports for which full predictions are given as our information permits. This table gives the value of

$$\text{Sa}\cos(h-\text{Sa}^\circ)+\text{Ssa}\cos(2h-\text{Ssa}^\circ) \qquad (60)$$

or the height of the mean sea level at any time above the mean sea level for the year; h is the mean longitude of the sun$=(\frac{1}{4}\frac{1}{3})^\circ\times$day of year$-80^\circ$; Sa, Sa° are the amplitude and epoch of the annual component, and Ssa, Ssa° the same for the semiannual component, the values of which are given in Table 4.

The heights in these Tide Tables have been reckoned from some mean plane which is regarded as fixed throughout the year, but the changes in surface level due to season of the year arising from meteorological causes are given in Table 5 for the first and sixteenth of each month. For instance, at St. Johns, Newfoundland, from November to February the sea is above its mean level, and from April to September it is below its mean for the whole year.

Table 6, pages 464–465, gives the Greenwich mean civil time of the transit of the moon across the meridian of Greenwich, together with the equation of time for Greenwich apparent noon.

To adapt this table to the local time of another meridian, *add* 2.1 minutes (or more accurately, the tabular hourly difference) for each hour or 15° of *west* longitude, and *subtract* the same for *east* longitude; that is, Gr. time transit $\pm L \times$ tab. diff. (or approx. $\pm L \times 2.1$ min.)=Local time transit. (61)

The upper sign to be used for *west* longitude, and the lower sign for *east* longitude. This result may be changed to standard time by (53), or we may pass directly from Greenwich to standard time, thus:

Gr. time transit + 60 (1.035 $L-S$) = Standard time transit, where L and S are the west longitudes, in hours, of the local meridian and of the time meridian, respectively. The expression 60 (1.035 $L-S$) gives the correction to the Greenwich transits in minutes of time. (62)

Tables 7 and 8, page 466, give the Greenwich mean civil times of the moon's phases, extreme distances, and declinations. To adapt these tables to any other meridian than that of Greenwich, *subtract* the longitude in time when it is *west* and *add* it when *east*. To express the result in western standard time, S, subtract S hours from the tabular values.

Table 9, pages 467–508.—This table gives the direction and velocity of the current at certain stations on the Atlantic coast of the United States for three hours before and three hours after high and low water. Current diagrams have been prepared in the Tidal Division of this Office, showing the currents on Georges Bank, in Boston Harbor, Nantucket and Vineyard Sounds, New York Harbor, Delaware Bay, and Chesapeake Bay. They have been constructed upon a plan devised jointly by Lieut. E. H. Tillman, U. S. N., Assistant, Coast and Geodetic Survey, and Mr. John Ross, Nautical Expert, of the same Survey. The predicted times of every slack water in the year are given for Seymour Narrows, B. C., and Sergius Narrows, Alaska. Some brief notes are also added in regard to the times of slack current at a few other places on the Pacific coast. See examples 7–12, pages 47–49.

Table 10, pages 510–529.—This table gives the mean local civil time of the rising and setting of the sun's *upper limb* for every fifth day of the year, and practically for each degree of latitude from the equator to either pole. The observer's eye is supposed to be 15 feet above the sea level or above the plane of land. The table was computed by applying the equation of time to the hour angle given by the formula

$$\cos t = \frac{\cos \zeta - \sin \varphi \sin \delta}{\cos \varphi \cos \delta} = \cos \zeta \sec \varphi \sec \delta - \tan \varphi \tan \delta, \qquad (63)$$

in which

t = the hour angle of the sun;
φ = the latitude of the station (+ if north, − if south);
δ = the sun's declination (+ if north, − if south);
ζ = the sun's zenith distance = 90° 56′ 09″ = 90° + r + s − π + d,

where

r = the refraction in the horizon	= 36′ 29″
s = the sun's semidiameter	= 16 01
π = the sun's horizontal parallax	= 0 09
d = the dip of the horizon for a height of 15 feet	= 3 48

The particular values of the declination used were obtained in the following way: A mean of the sun's declination at Greenwich apparent noon for the same dates between March 1, 1901, and March 1, 1905, was taken for every fifth day; also a mean value for the variation in declination for one hour was found in the same way. From these quantities a

mean value of the declination for six hours before and six hours after Greenwich apparent noon was found for each date. The former were used as the values of the declination for computing the times of sunrise, and the latter for computing the times of sunset. A mean value for the equation of time was found similarly for the same dates and applied to the values obtained by the formula.

The times of sunrise and sunset are exact for the given declinations. If accuracy is desired, enter the table with the declination as an argument, interpolating when necessary. A table of this kind, using dates as an argument, will not apply equally well to all years, but the "Approximate date" of these tables will rarely be a whole day too early or too late. Hence, it will usually suffice to enter the table with the date as an argument, thus avoiding the necessity of ascertaining the sun's declination. The error resulting from using the approximate date as the true one varies with the season of the year, for near the solstices it will be practically nothing for all ordinary latitudes, and near the equinoxes it may in extreme cases be as much as two minutes in latitude 50°.

The critical declinations for failure to rise or set were obtained by the following formulas:

$$\text{Failure to rise when } \delta = \mp 90^\circ\ 56'\ 09'' + \varphi \tag{64}$$

$$\text{Failure to set when } \delta = \pm 89^\circ\ 03'\ 51'' - \varphi \tag{65}$$

the upper sign being used for north latitudes and the lower for south.

Whenever the sunlight exceeds twenty-four hours the limiting dates are given between which any portion of the sun, however small, remains visible, and the corresponding dates are also given whenever the sun remains entirely invisible for more than twenty-four hours. The dates were obtained by means of the mean values of the declination and are therefore only approximate.

The duration of sunlight may be found by adding 12^h to the time of setting and subtracting the time of rising from the sum. The difference in the duration of sunlight for the forenoon and afternoon of the same day, which sometimes amounts to more than half an hour, is twice the equation of time, slightly modified by the sun's motion in declination between rising and setting.

The sun's zenith distance, $\zeta = 90^\circ\ 56'\ 09''$, was taken as constant, for the variation of refraction in the horizon is the only element which might produce a sensible change in the time of rising or setting, and it is impossible to estimate these variations in advance. Fortunately, however, there will rarely be any material error in the table from this source, for even under the most extreme changes in atmospheric temperature and pressure, refraction in the horizon can not vary more than about 8′ on either side of its mean value, which at the time of the local summer solstice, when its greatest possible effect is produced, would make only a few seconds difference in time of rising or setting near the equator, the correction becoming a whole minute in latitude 48°, two minutes in latitude 61°, and in higher latitudes the effect rapidly increases as the pole is approached. Hence, as the usual variations in refraction are much less than the above, it is believed that the table will generally be found correct to the nearest minute for all usual latitudes, but may occasionally be out from three to five minutes or more in very high latitudes.

Table 11, pages 530–531.—This table gives the mean local civil time of the beginning of morning astronomical twilight and of the end of evening astronomical twilight for various latitudes and declinations. Astronomical twilight is assumed to begin or end when the sun's center is 18° below the rational horizon, at which time total darkness, so far as the sun is concerned, ends or begins. This value of 18° for the sun's center below the horizon, which is generally accepted as the limit of astronomical twilight, was determined from observations made in rather high latitudes, and is probably somewhat too large for low latitudes,

where twilight may begin later in the morning and end sooner in the evening than given by this table. The table is similar in arrangement to Table 10, but less extended, and was computed in the same manner, taking ζ as 108°. It is exact for the given declinations, but applies only approximately to the dates given. In so indefinite a matter as twilight interpolation by estimation will usually be sufficiently accurate, without the trouble of computing proportional parts.

The duration of twilight for any given day may be found by subtracting the time of beginning of morning twilight from the time of sunrise or by subtracting the time of sunset from the time of end of evening twilight. In latitudes where there is an interval of darkness each twenty-four hours, the longest twilight occurs in June north of the equator and in December south of the equator, about the time of the summer solstice. The shortest twilights occur when the sun is a little more than 90° from the elevated pole, those in the United States being in the first halves of March and October.

Civil twilight begins or ends when the sun's center is 6° below the rational horizon. At this time the brightest stars are visible. The duration of civil twilight is usually about one-third of the duration of astronomical twilight, but is less than one-third when the astronomical twilight is very long.

Table 12, page 532.—This table gives the reduction of local mean time to standard meridian time. Whenever standard time is used, the values given in Tables 10 and 11 must be corrected by the difference of longitude in time between the station and its standard meridian by means of Table 12.

Examples of the use of these tables.

ON THE USE OF TABLES 1, 3, AND 6, EXAMPLES 1 TO 6.

Example 1.—Find the times and heights of high and low waters at Pulpit Harbor, Me., August 28, 1912.

For the State of Maine the index refers to page 346, indicating the beginning of the portion of Table 3 in which Pulpit Harbor is found in its geographic sequence. The standard port for reference is there seen to be Boston, page 69.

	Standard time.	Height.
	h. m.	*Feet.*
Page 71. First LW at Boston, August 28, 1912	5 35	0.0
Page 348. LW differences for Pulpit Harbor	− 0 32	0.0
First LW at Pulpit Harbor, August 28, 1912	5 03	0.0
Page 71. First HW at Boston, August 28, 1912	11 42	8.8
Page 348. HW differences for Pulpit Harbor	− 0 27	+ 0.2
First HW at Pulpit Harbor, August 28, 1912	11 15	9.0
Page 71. Second LW at Boston, August 28, 1912	17 47	0.6
Page 348. LW differences for Pulpit Harbor	− 0 32	0.0
Second LW at Pulpit Harbor, August 28, 1912	17 15	0.6
Page 71. Second HW at Boston, August 28, 1912	23 56	9.5
Page 348. HW differences for Pulpit Harbor	0 27	+ 0.2
Second HW at Pulpit Harbor, August 28, 1912	23 29	9.7

0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, $23^h\ 29^m$ is $11^h\ 29^m$ p. m.

If, for any reason, local time is desired, it may be obtained from the column of Table 3 headed "Longitude in time" by subtracting this longitude for the station from the standard time meridian and applying this difference, according to sign, to the predictions given by these tables. See formula (52). For instance, the standard time meridian at Pulpit Harbor is 5^h, and the local longitude is $4^h\ 36^m$; hence $5^h - 4^h\ 36^m = +24^m$ is the correction to change standard to local time at Pulpit Harbor. But it must be borne in mind that local time is rarely used in the United States.

Example 2—Rough predictions without the use of Table 1.—Find the approximate times and heights of high and low waters at Pulpit Harbor, Me., for the date given in Example 1, without making use of Table 1.

At this station the diurnal and phase inequalities being comparatively small, the approximate times of the tides may be obtained by adding the lunitidal intervals, Table 3, line 27, page 349, to the moon's local transits, but for convenience Greenwich transits, Table 6, will be used directly, and the lunitidal intervals adapted to them by adding, once for all, 60 $(1.035L - S)$, from equation 62, page 40. For Pulpit Harbor this is

$$60\ [(1.035 \times 4^h.6) - 5^h] = -14^m.$$

$\therefore$ Adapted HWI $= 11^h\ 09^m - 14^m = 10^h\ 55^m$,
Adapted LWI $= 4^h\ 54^m - 14^m = 4^h\ 40^m$.

	h.	m.	h.	m.
Page 461. Moon's transits, August 10, 1911	0	13	(12	34)
Adapted HWI	10	55	10	55
Standard times of HW's, August 10, 1911	11	08	23	29
Page 461. Moon's transits, August 10, 1911	0	13	(12	34)
Adapted LWI	4	40	4	40
Standard times of LW's, August 10, 1911	4	53	17	14

From Table 3 (pp. 348–349, line 27) we find Mn = 9.8 feet, and that the plane of reference is mean low water. The time and height of tides, August 10, thus roughly predicted, would be

4 :53	11 :08	17 :14	23 :29
0.0	9.8	0.0	9.8

The above example is given for the purpose of illustrating the use of a table of the moon's transits as a ready means for making approximate predictions for any year. For the year of the tide tables the method is not recommended, the preceding or following being easier of application and generally more exact.

Example 3.—Find the times and heights of high and low waters at Juneau, Alaska, January 4, 1912.

For the territory of Alaska the index refers to page 400, indicating the beginning of the portion of Table 3 in which Juneau is found in geographic sequence. The standard port for reference is there seen to be Sitka, page 169. In this example, formula (58) on page 38 is used in obtaining the heights because the ratio of ranges differs more than 25 per cent from unity.

	Standard time.	Height.
	h. *m.*	*Feet.*
Page 169. First HW at Sitka, January 4, 1912	0 40	8.9
Page 402. HW difference for Juneau	+ 0 36	ratio 1.88
Product, $r\ h_{,}$=		16.7
Page 402. $D_{,,}-r\ D_{,}$=9.4−1.88×5.4=		− 0.8
First HW at Juneau, January 4, 1912	1 16	15.9
Page 169. First LW at Sitka, January 4, 1912	5 54	3.9
Page 402. LW difference for Juneau	+ 0 35	ratio 1.88
Product, $r\ h_{,}$=		7.3
Page 402. $D_{,,}-r\ D_{,}$=9.4−1.88×5.4=		− 0.8
First LW at Juneau, January 4, 1912	6 29	6.5
Page 169. Second HW at Sitka, January 4, 1912	11 52	11.4
Page 402. HW difference for Juneau	+ 0 36	ratio 1.88
Product, $r\ h_{,}$=		21.4
Page 402. $D_{,,}-r\ D_{,}$=9.4−1.88×5.4=		− 0.8
Second HW at Juneau, January 4, 1912	12 28	20.6
Page 169. Second LW at Sitka, January 4, 1912	18 48	− 2.9
Page 402. LW difference for Juneau	+ 0 35	ratio 1.88
Product, $r\ h_{,}$=		− 5.5
Page 402. $D_{,,}-r\ D_{,}$=9.4−1.88×5.4=		− 0.8
Second LW at Juneau, January 4, 1912	19 23	− 6.3

Example 4—A more accurate method for determining the height of the tide at any secondary station where the tide never becomes diurnal.—Find the heights of high and low waters at Juneau, Alaska, for the date given in Example 3.

It often happens that the ratio of ranges of the diurnal wave for the principal and subordinate stations is not equal to the ratio of their mean ranges. This implies that the types of the tides at the two places are not exactly similar. The following method, which is somewhat more elaborate than the one just exemplified, should be used if more carefully predicted heights are required:

(a) Find the times of the required tides as in the above example, and then copy the heights from the predictions for the standard port, beginning and ending so as to include at each end one high and one low water before and after the required heights; for distinction these extra heights may be inclosed in brackets.

(b) From Table 3, take out the following quantities, the notation used here being temporary:

r =the ratio of ranges.

r'=$\frac{\text{tropic range diurnal wave secondary station.}}{\text{tropic range diurnal wave primary station.}}$

$D_{,}$=depression below mean sea level of reference plane at the standard port.

$D_{,,}$=depression below mean sea level of reference plane at the subordinate port.

(c) The high and low water inequalities (HWQ), (LWQ), given in Table 3, are for the *tropic tides*, and will not apply to other tides. To find the high-water inequality (*HW ineq.*) for any high water at the principal station, take the mean difference between its height and that of the preceding and following high waters of (a); and then multiply it by $\frac{1}{2}(r-r')$ of (b). The low-water inequality (*LW ineq.*) is found in a similar manner, and multiplied by the same factor. The inequality obtained by comparing a higher high water with the lower high waters on either side of it may be marked $(HW\ ineq.)_a$, and the inequality of which the lower high water is the middle height may be marked $(HW\ ineq.)_b$. Similarly the low-water inequalities are designated $(LW\ ineq.)_a$, and $(LW\ ineq.)_b$, for the lower low waters and higher low waters, respectively.

(d) The required heights are then given by the following equations, where single subscripts refer to heights at the standard and double subscripts to heights at the subordinate or required station:

$$(\text{HHW})_{,,}=r\times(\text{HHW})_{,}+(D_{,,}-r\times D_{,})-(HW\ ineq.)_a\times\tfrac{1}{2}(r-r')$$
$$(\text{LHW})_{,,}=r\times(\text{LHW})_{,}+(D_{,,}-r\times D_{,})+(HW\ ineq.)_b\times\tfrac{1}{2}(r-r')$$
$$(\text{HLW})_{,,}=r\times(\text{HLW})_{,}+(D_{,,}-r\times D_{,})-(LW\ ineq.)_b\times\tfrac{1}{2}(r-r')$$
$$(\text{LLW})_{,,}=r\times(\text{LLW})_{,}+(D_{,,}-r\times D_{,})+(LW\ ineq.)_a\times\tfrac{1}{2}(r-r')$$

Applying the above to the given example for Juneau, the computation is as follows:

(a,) The heights from page 169, for Sitka, are:

Jan. 3, 1912,	——	[11.1	−2.4]	——
Jan. 4, 1912,	8.9	3.9	11.4	−2.9
Jan. 5, 1912,	[9.3	3.5]	——	——

(b,) The ratio of ranges is given on page 402, line 25, as $r=1.88$; to find r', observe on page 403, line 25, that the tropic range of the diurnal wave for Juneau is 6.8, and line 44, page 403, for Sitka, the corresponding value is 4.9, hence $r'=\frac{6.8}{4.9}=1.39$; on the same lines we find $D_{,}=5.4$, and $D_{,,}=9.4$. The terms $(D_{,,}-r\times D_{,})$ and $\frac{1}{2}(r-r')$, in the above equations, are constants for any given station and are here equal to $9.4-1.88\times5.4=-0.8$ and $\frac{1}{2}(1.88-1.39)=.245$, respectively. Of the unbracketed heights, 8.9 is the LHW, 3.9 the HLW, 11.4 the HHW, and −2.9 the LLW. Taking the mean of the differences between each of these and the preceding and following tide of same phase, we obtain the inequalities as shown below.

(c,) The high-water inequalities are:

11.1− 8.9=2.2 for LHW	11.4− 8.9=2.5 for HHW
11.4− 8.9=2.5 for LHW	11.4− 9.3=2.1 for HHW
Mean =2.35 for LHW	Mean =2.3 for HHW
Factor = .245=$\frac{1}{2}(r-r')$	Factor = .245=$\frac{1}{2}(r-r')$
Product =0.6 =$(HW\ ineq.)_b\times\frac{1}{2}(r-r')$	Product =0.6 =$(HW\ ineq.)_a\times\frac{1}{2}(r-r')$

The low-water inequalities are:

3.9+2.4=6.3 for HLW	3.9+2.9=6.8 for LLW
3.9+2.9=6.8 for HLW	3.5+2.9=6.4 for LLW
Mean =6.55 for HLW	Mean =6.6 for LLW
Factor = .245=$\frac{1}{2}(r-r')$	Factor = .245=$\frac{1}{2}(r-r')$
Product=1.6 =$(LW\ ineq.)_b\times\frac{1}{2}(r-r')$	Product=1.6 =$(LW\ ineq.)_a\times\frac{1}{2}(r-r')$

(d,) The required heights at Juneau are therefore:

$$(\text{LHW})_{,,}=1.88\times\ 8.9\ -0.8+0.6=\ 16.5\text{ feet.}$$
$$(\text{HLW})_{,,}=1.88\times\ 3.9\ -0.8-1.6=\ 4.9\text{ feet.}$$
$$(\text{HHW})_{,,}=1.88\times 11.4\ -0.8-0.6=\ 20.0\text{ feet.}$$
$$(\text{LLW})_{,,}=1.88\times-2.9\ -0.8+1.6=\ -4.7\text{ feet.}$$

The heights by this process are reckoned from the plane given at the head of the columns of differences for heights in Table 3, which in this case is the mean of the lower low waters. In Table 5 are given the variations of mean sea level at many of the principal ports, from which one may roughly estimate the correction due to season of the year at the subordinate port. For the above example this correction happens to be about +0.2 feet, and it affects all heights alike.

Example 5—Rough predictions without the use of Table 1.—Find the approximate times and heights of high and low waters at Juneau, Alaska, for the date given in Example 3.

At this station the diurnal inequality is large, especially when the moon is far from the equator, as it is upon January 4, 1912. For such dates the times of tide become approximately known by adding the tropic intervals, properly adapted, as in Example 2, to the Greenwich transits, Table 6.

	h.	m.		h.	m.	h.	m.	
Adapted tropic HHWI=	0	19	+	0	17	=0	36*b*	
Adapted tropic LLWI=	7	06	+	0	17	=7	23*b*	
Adapted HWI=	0	45	+	0	17	=1	02	
Adapted LWI=	6	56	+	0	17	=7	13	
Adapted tropic LHWI=2×(1	02)−(0	36)=1	28*a*, formula (32)					
Adapted tropic HLWI=2×(7	13)−(7	23)=7	03*a*, formula (33)					

	h.	m.	h.	m.
Page 460. Moon's transits, January 3, 14, 1912	23	29	(12	03)
Adapted tropic HWI's	1	28*a*	0	36*b*
Standard time of HW's, January 4, 1912	0	57	12	39
Page 460. Moon's transits, January 3, 4, 1912	23	29	(12	03)
Adapted tropic LWI's	7	03*a*	7	23*b*
Standard time of LW's, January 4, 1912	6	32	19	26

Table 3, page 403, line 25, gives 2.2 and 6.2 feet for the tropic diurnal inequality in HW and LW, respectively, and 14.5 feet for mean range. Consequently the higher high water should be about one-half the tropic diurnal inequality higher than mean HW, and the lower high water as much lower. So for the low waters. The heights of the four tides referred to mean low water are:

	Ft.	Ft.	Ft.
HHW=	14.5	+1.1=	15.6
LHW=	14.5	−1.1=	13.4
HLW=	0	+3.1=	3.1
LLW=	0	−3.1=	−3.1

The predictions obtained from Table 1 are referred to the mean of the lower low waters, which is, by § 9, formula (40),

$$\frac{6.2}{3}+\frac{.04\ (18.3-14.5)^2}{6.2}=2.2$$

feet below mean low water. Arranging the tides in the order of occurrence and referring the heights just obtained to the plane of mean lower low water, we have

LHW	HLW	HHW	LLW
0:57	6:32	12:39	19:26
15.6	5.3	17.8	−0.9

Example 6.—Find the times and heights of high and low water at Shibayama, Japan, March 28, 1912.

For Japan the index refers to page 406, indicating the beginning of the portion of Table 3 in which Shibayama is found in its geographic sequence. The standard port for reference is there seen to be San Francisco, page 157. In this example, formula (58) on page 38 is used in obtaining the heights. On pages 408–409, line 24, we obtain $r = 0.13$

and $D_{,,} = 0.3$; and on page 391, line 12, we have $D_{,} = 3.2$. That part of formula (58), represented by $D_{,,} - r D_{,}$, is a constant for any given station and is here equal to $0.3 - 0.13 \times 3.2 = -0.1$.

	Standard time.	Height.
	h. *m.*	*Feet.*
Page 157. Second LW at San Francisco, March 28, 1912	14 02	−0.2
Page 408. LW difference for Shibayama	− 9 53	ratio 0.13
Product $r h_{,}$ =		0.0
$D_{,,} - r D_{,}$ =		−0.1
First LW at Shibayama, March 28, 1912	4 09	−0.1
Page 157. Second HW at San Francisco, March 28, 1912	21 22	4.7
Page 408. HW difference for Shibayama	−10 17	ratio 0.13
Product $r h_{,}$ =		0.6
$D_{,,} - r D_{,}$ =		−0.1
First HW at Shibayama, March 29, 1912	11 05	0.5
Page 157. First LW at San Francisco, March 28, 1912	2 20	2.8
Page 408. LW difference for Shibayama	− 9 53	ratio 0.13
Product $r h_{,}$ =		0.4
$D_{,,} - r D_{,}$ =		−0.1
Second LW at Shibayama, March 28, 1912	16 27	0.3
Page 157. First HW at San Francisco, March 29, 1912	8 08	5.5
Page 408. HW difference for Shibayama	−10 17	ratio 0.13
Product $r h_{,}$ =		0.7
$D_{,,} - r D_{,}$ =		−0.1
Second HW at Shibayama, March 28, 1912	21 51	0.6

These predictions for Shibayama are in Cosmopolitan or Standard time of the one hundred and thirty-fifth meridian east, and the date requires no alteration, because the one station is east of the day line and the other is west. In predicting tides from the moon's transits (see examples 2, 5), S and L for Shibayama become negative—i. e., they are reckoned eastward; if taken otherwise, the change of date introduced by going westward from Greenwich to Shibayama would have to be allowed for.

On the Use of Table 9—Current Tables, Examples 7 to 12.

Example 7.—Find the direction and velocity of the current at station (5), page 472, which is in mid-channel south from Clark Island, Portsmouth Harbor, at noon, September 7, 1912.

From the current table, page 472, we find that the currents in this vicinity are referred to the tides at Portland, the predictions for which begin on page 65.

Upon referring to these predictions it is seen that noon, September 7, 1912, is about one hour before Portland low water. The current table, for station (5), page 472, shows that at such a time the direction of the current is N. 84° E., and that its velocity is 2.3 knots.

Example 8.—Find the times, referred to the Boston tides, of slack water and of strength of current at station (1), page 473, which is in South Channel 1.2 miles N. 85° E. from Deer Island Light, Boston Harbor.

To find the times of slack with regard to high or low water, observe where the current table, for station (1), page 473, shows a sudden change of direction, which is between 0 h. and 1 h. after HW, and 0 h. and 1 h. after LW at Boston. In the first instance the

velocities are 0.1 and 0.8 knot, which are to each other as 1 to 8, so that if the 60 minutes between 0 h. and 1 h. are divided into 1 + 8 = 9 parts, one of these parts, or about 7 minutes, is the time elapsing to the middle of the slack. This slack occurs, therefore, at $0^h\ 07^m$ after HW, which shows that it is the slack before ebb. Near the second slack the velocities are as 1 to 9, so that if 60 minutes are divided into 1 + 9 = 10 parts, one of these, or 6 minutes, represents the time in excess of 0 hour after LW to the slack before flood, which occurs, therefore, at $0^h\ 06^m$ after LW.

To find the times of strength of flood or ebb with regard to high or low water is not quite so simple as the preceding; but for most purposes it will suffice to determine these times very approximately by a mere inspection of the tables to note where the greatest velocities occur. Thus, for this example, the strength of flood is readily seen to be about $3^h\ 05^m$ before HW and the strength of ebb about $2^h\ 40^m$ before LW. More exact determinations of these times can be made by plotting the velocities upon profile paper.

The above times of slack and strength, with regard to the times of high and low water at Boston, may be regarded as constants for this station, for the table does not enable us to take into account the small fluctuations which these values undergo during a lunation. In order to turn these relative times into actual times for any given date, proceed as in Example 10.

Example 9.—Find the times, referred to the New York tides, of slack water and of strength of current at The Narrows, New York Harbor, from the diagram on page 489.

To find the times of slack, with regard to high or low water, note on the diagram, page 489, where the curves called "slack before flood" and "slack before ebb" cross the horizontal line opposite "The Narrows." For slack before flood this will be found to be about $2^h\ 20^m$ after LW, and for slack before ebb about $1^h\ 20^m$ after HW at New York.

The times of strength of flood and ebb are obtained from the diagram in a similar way, and are for strength of flood about $1^h\ 25^m$ before HW, and for strength of ebb about $2^h\ 00^m$ before LW at New York. The velocities are for flood, between 1.7 and 1.8 knots, and for ebb, between 2.2 and 2.3 knots, as shown by the small figures on the diagram.

The above times of slack and strength, with regard to the times of high and low water at New York, may be regarded as constants for this station, for the diagram does not enable us to take into account the small fluctuations which these values undergo during a lunation.

Example 10.—Find the Eastern Standard (seventy-fifth meridian) times of slack water and of strength of current at The Narrows, New York Harbor, for June 9, 1912.

	Standard time.	
	h. *m.*	*h.* *m.*
Page 86. Times of HW at New York, June 9, 1912	1 54	14 50
Example 9. Times of strength of flood at The Narrows before New York HW	1 25	1 25
Times of strength of flood at The Narrows, June 9, 1912	0 29	13 25
Page 86. Times of HW at New York, June 9, 1912	1 54	14 50
Example 9. Times of slack before ebb at The Narrows after New York HW	1 20	1 20
Times of slack before ebb at The Narrows, June 9, 1912	3 14	16 10
Page 86. Times of LW at New York, June 9, 1912	8 43	21 30
Example 9. Times of strength of ebb at The Narrows before New York LW	2 00	2 00
Times of strength of ebb at The Narrows, June 9, 1912	6 43	19 30
Page 86. Times of LW at New York, June 9, 1912	8 43	21 30
Example 9. Times of slack before flood at The Narrows after New York LW	2 20	2 20
Times of slack before flood at The Narrows, June 9, 1912	11 03	23 50

Example 11.—Find the lunicurrent intervals for the times of slack water and of strength of current for Example 9.

The port of reference for the currents in The Narrows is New York (Governors Island), the constants for which are found by the index to begin on page 358, and on the opposite page, line 10, the lunitidal intervals are given as $8^h\ 04^m$ and $2^h\ 05^m$, for high and low waters, respectively. Whenever the times of slack or strength are *before* high or low water, these times must be subtracted from the above lunitidal intervals in order to obtain the corresponding lunicurrent intervals; but whenever these times are *after* high or low water, add them to the lunitidal intervals.

Applying these rules to the times of slack and strength already found, and arranging the results in the order of their occurrence, we have—

	h.	m.	h.	m.	h.	m.
Lunicurrent interval for strength of ebb,	= 2	05 − 2	00 = 0	05		
Lunicurrent interval for slack before flood,	= 2	05 + 2	20 = 4	25		
Lunicurrent interval for strength of flood,	= 8	04 − 1	25 = 6	39		
Lunicurrent interval for slack before ebb,	= 8	04 + 1	20 = 9	24		

Whenever the lunitidal interval is less than the time of slack or strength and the latter has to be taken from the former, add $12^h\ 25^m$ to the lunitidal interval before making the subtraction. When the sum of the lunitidal interval and the time of slack or strength exceeds $12^h\ 25^m$, subtract that amount from the sum.

Example 12.—Find the lunicurrent intervals for one-quarter and for three-quarter ebb and flood, respectively, for the preceding example.

One-half of the sum of the lunicurrent intervals for slack before ebb and strength of ebb is called the lunicurrent interval for one-quarter ebb; and similarly, substituting flood for ebb, the interval for one-quarter flood is obtained. One-half of the sum of the lunicurrent intervals for strength of ebb and slack before flood gives the lunicurrent interval for three-quarter ebb, and exchanging the words ebb and flood gives the interval for three-quarter flood.

Whenever the two lunicurrent intervals between which the one-quarter or three-quarter points lie differ from one another more than 6 hours, find the half sum in the usual way, and if this half sum is less than $6^h\ 13^m$ increase it by that amount, but when the half sum exceeds $6^h\ 13^m$ diminish it by that amount. Do not add $6^h\ 13^m$ to or subtract it from any half sum unless the two lunicurrent intervals from which the sum was obtained differ by more than 6 hours. Applying these remarks to the example in hand, we have—

	h.	m.	h.	m.	h.	m.	h.	m.
Lunicurrent interval for three-quarter ebb,	=½ (0	05+4	25)=				2	15
Lunicurrent interval for one-quarter flood,	=½ (4	25+6	39)=				5	32
Lunicurrent interval for three-quarter flood,	=½ (6	39+9	24)=				8	02
Lunicurrent interval for one-quarter ebb,	=½ (0	05+9	24)+6	13=	10		57	

If it is desired to find the time at which the phase of current corresponding to any given lunicurrent interval occurs before or after the time of tide at the port of reference, take the difference between the given lunicurrent interval and either the high or the low water lunitidal interval at the port of reference, according to which gives the less difference.

ON THE USE OF TABLES 10, 11, AND 12.—SUNRISE, SUNSET, AND TWILIGHT, EXAMPLES 13, 14, AND 15.

Example 13.—Find the local mean time and standard time of sunrise at San Francisco, Cal., on April 3, 1912.

For San Francisco the latitude = 37° 49′ N.
For San Francisco the longitude =122° 29′ W.
For San Francisco Standard time meridian =120° 00′ W.
The sun's declination on April 3, 1912, at 6 a. m. = 5° 19′ N.

Approximate method.	h.	m.
April 1, for lat. 38° N., Table 10	5	45
Correction for 2 days		−03
Correction for 11′ latitude		00
Local mean time sunrise	5	42
Red. for long. 2° 29′ W., Table 12		+10
Standard time sunrise	5	52

Exact method.	h.	m.
Decl. 4° 15′ N., for lat. 38° N., Table 10	5	45
Correction for 64′ declination		−04
Correction for 11′ latitude		00
Local mean time sunrise	5	41
Red. for long. 2° 29′ W., Table 12		+10
Standard time sunrise	5	5

Example 14.—Find the local mean time of sunset at Buenos Aires on December 10, 1912.

For Buenos Aires the latitude =34° 36′ S.
For Buenos Aires the longitude =58° 22′ W.
Sun's declination on December 10, at 7 p. m. =22° 58′ S.

Approximate method.	h.	m.
December 12, for lat. 35° S., Table 10	7	08
Correction for 2 days		−02
Correction for 24′ latitude		−01
Local mean time sunset	7	05

Exact method.	h.	m.
Decl. 23° 04′ S., for lat. 35° S., Table 10	7	08
Correction for 6′ declination		−01
Correction for 24′ latitude		−01
Local mean time sunset	7	06

Example 15.—Find the local mean time of beginning of morning twilight, and duration of astronomical and civil twilight at San Francisco, Cal., on April 3, 1912, with the data of Example 13.

Approximate method.	h.	m.
April 1, for lat. 40° N., Table 11	4	13
Correction for 2 days	−0	04
Correction for 2° 11′ latitude	+0	04
Local mean time of beginning of twilight.	4	13

Exact method.	h.	m.
Decl. 4° 15′ N., for lat. 40° N., Table 11	4	13
Correction for 64′ declination	−0	05
Correction for 2° 11′ latitude	+0	04
Local mean time of beginning of twilight.	4	12

	h.	m.
Local mean time of sunrise, Example 13	5	41
Local mean time of beginning of twilight	4	12
Duration of astronomical twilight	1	29
Duration of civil twilight, one-third of above	0	30
Subtracting 30 minutes from time of sunrise gives for the beginning of civil twilight	5	11

TABLE 1.—PREDICTED TIDES FOR THE YEAR 1912.

INDEX TO PRINCIPAL PORTS.

TIDAL STATIONS, TABLE 1.

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Boston (Navy-Yard), Massachusetts	69	*Batavia, Java	209
Newport (Fort Adams), Rhode Island	73	*Manila (Pasig River Entrance), P. I	213
New London (Custom-House Wharf), Conn	77	*Honolulu (Oahu Island), Hawaiian Islands	217
Willets Point (Government Wharf), New York	81	Apia (Upolu Island), Samoan Islands	221
New York (Governors Island), New York	85	Wellington, New Zealand	225
Sandy Hook (The Horseshoe), New Jersey	89	Auckland, New Zealand	229
Philadelphia (Chestnut St. Pier), Pennsylvania	93	Sydney (Fort Denison), Australia	233
Baltimore (Fells Point), Maryland	97	Melbourne (Williamstown), Australia	237
Washington (Seventh St.), Dist. of Columbia	101	*Port Adelaide, Australia	241
Old Point Comfort (Fort Monroe), Virginia	105	Rangoon, Burma	245
Wilmington (Cape Fear River), N. Carolina	109	*Calcutta (Kidderpore), India	249
Charleston (Custom-House Wharf), S. Carolina	113	*Madras, India	253
Savannah Entrance (Tybee I. Light), Georgia	117	*Colombo (Ceylon), India	257
Fernandina (Dade St.), Florida	121	Bombay (Apollo Bandar), India	261
Key West (Fort Taylor), Florida	125	*Karachi, India	265
*Galveston (Doswell's Wharf), Texas	129	*Aden, Arabia	269
*Rio de Janeiro, Brazil	133	Cape Town (Table Bay), Africa	273
*Buenos Aires, Argentina	137	Lisbon (Arsenal), Portugal	277
Cape Horn (Orange Bay), Chile	141	*Rochelle, France	281
Valparaiso, Chile	145	Brest, France	285
Panama (Naos Island), Canal Zone	149	*Havre, France	289
*San Diego (La Playa), California	153	Edinburgh (Leith), Scotland	293
San Francisco (Fort Point), California	157	Hull (Humber River), England	297
Astoria (Columbia River), Oregon	161	Sheerness (Thames River Entrance), England	301
*Port Townsend (Puget Sound), Washington	165	London (London Bridge), England	305
Sitka, Alaska	169	Dover, England	309
Kodiak (St. Paul Harbor, Kodiak I.), Alaska	173	Liverpool, England	313
*St. Michael (Norton Sound), Alaska	177	Greenock (Firth of Clyde), Scotland	317
*Yokohama (Nishihatoba), Japan	181	Kingstown (Dublin Bay), Ireland	321
Nagasaki, Japan	185	Queenstown (Haulbowline Island), Ireland	325
Tientsin Entrance (Taku Light-Ship), China	189	Hamburg, Germany	329

* Predicted on new tide-predicting machine, which was designed and constructed in the Coast and Geodetic Survey Office.

CURRENT STATIONS, TABLE 9.

Seymour Narrows (Discovery Passage), B. C	498	Sergius Narrows (Peril Strait), Alaska	502

For general index see end of volume.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:50 3.1	10:32 0.6	16:42 2.5	22:14 0.8
	Tu	2	4:46 3.4	11:31 0.3	17:41 2.6	23:10 0.6
N	W	3	5:40 3.7	12:22 0.1	18:30 2.7	. . . . .
☌ ☍	Th	4	0:02 0.4	6:27 4.0	13:10 —0.1	19:12 2.8
	F	5	0:50 0.3	7:15 4.1	13:55 —0.2	20:00 2.9
	S	6	1:35 0.2	8:02 4.1	14:40 —0.2	20:42 2.9
	S	7	2:22 0.2	8:49 4.0	15:22 —0.1	21:27 2.9
	M	8	3:08 0.3	9:36 3.8	16:05 0.1	22:12 2.9
E	Tu	9	3:57 0.4	10:25 3.4	16:59 0.3	23:01 2.9
	W	10	4:58 0.6	11:16 3.1	17:35 0.5	23:51 2.8
☾	Th	11	5:55 0.8	12:10 2.7	18:21 0.7	. . . . .
	F	12	0:48 2.8	7:10 0.9	13:20 2.4	19:15 0.9
	S	13	1:52 2.7	8:26 1.0	14:45 2.2	20:20 1.0
	S	14	2:55 2.8	10:10 1.1	16:10 2.1	21:25 1.1
	M	15	3:55 2.9	11:22 1.0	17:28 2.1	22:21 1.0
	Tu	16	4:48 3.0	12:10 0.9	18:13 2.2	23:16 0.9
S A	W	17	5:34 3.2	12:46 0.7	18:50 2.3	23:58 0.8
	Th	18	6:15 3.3	13:14 0.5	19:20 2.4	. . . . .
●	F	19	0:37 0.7	6:53 3.4	13:40 0.4	19:45 2.5
	S	20	1:08 0.7	7:30 3.5	14:07 0.3	20:11 2.6
	S	21	1:36 0.7	8:06 3.5	14:36 0.2	20:38 2.7
	M	22	2:06 0.6	8:38 3.5	15:05 0.2	21:07 2.8
	Tu	23	2:42 0.5	9:12 3.4	15:35 0.2	21:37 2.9
	W	24	3:20 0.5	9:46 3.2	16:05 0.3	22:13 2.9
E	Th	25	4:02 0.5	10:25 3.0	16:40 0.4	22:56 2.9
	F	26	4:52 0.6	11:06 2.8	17:14 0.6	23:45 2.9
	S	27	5:52 0.7	11:55 2.6	17:52 0.8	. . . . .
☽	S	28	0:46 2.9	7:12 0.9	13:00 2.3	18:44 1.0
	M	29	2:02 2.9	8:50 0.9	14:50 2.1	20:08 1.1
	Tu	30	3:18 3.1	10:18 0.8	16:30 2.1	21:40 1.0
N	W	31	4:26 3.3	11:27 0.6	17:40 2.3	22:56 0.7

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	5:25 3.6	12:21 0.3	18:30 2.6	23:56 0.4
○	F	2	6:18 3.9	13:07 0.1	19:13 2.8	. . . . .
	S	3	0:47 0.2	7:07 4.1	13:47 —0.1	19:52 3.0
	S	4	1:33 0.1	7:54 4.1	14:26 —0.2	20:30 3.2
	M	5	2:19 0.0	8:37 4.0	15:02 —0.2	21:08 3.3
E	Tu	6	3:00 0.0	9:20 3.8	15:39 —0.1	21:48 3.3
	W	7	3:45 0.1	10:00 3.4	16:12 0.1	22:24 3.2
	Th	8	4:50 0.3	10:40 3.1	16:46 0.4	23:06 3.1
☾	F	9	5:17 0.6	11:24 2.7	17:18 0.7	23:55 2.9
	S	10	6:14 0.9	12:09 2.3	17:52 1.0	. . . . .
	S	11	0:52 2.8	7:36 1.2	13:20 2.0	18:30 1.2
	M	12	2:02 2.7	9:46 1.3	15:32 1.8	20:07 1.4
S	Tu	13	3:15 2.7	11:30 1.2	17:36 1.9	21:54 1.2
A	W	14	4:22 2.8	12:12 1.0	18:17 2.0	23:00 1.0
	Th	15	5:15 3.0	12:38 0.8	18:44 2.2	23:50 0.9
	F	16	6:00 3.2	13:09 0.6	19:05 2.4	. . . . .
	S	17	0:30 0.7	6:40 3.4	13:23 0.4	19:30 2.6
●	S	18	1:02 0.6	7:15 3.5	13:46 0.2	19:52 2.8
	M	19	1:32 0.4	7:49 3.6	14:12 0.1	20:18 3.0
E	Tu	20	2:02 0.3	8:20 3.6	14:39 0.0	20:44 3.1
	W	21	2:35 0.2	8:53 3.5	15:05 0.1	21:12 3.2
	Th	22	3:10 0.2	9:25 3.3	15:38 0.2	21:45 3.3
	F	23	3:48 0.2	10:00 3.1	16:09 0.3	22:24 3.2
	S	24	4:32 0.3	10:35 2.9	16:39 0.5	23:10 3.1
☽	S	25	5:23 0.5	11:15 2.5	17:01 0.8	. . . . .
	M	26	0:10 3.0	6:01 0.8	12:10 2.2	17:43 1.0
N	Tu	27	1:29 2.9	8:26 1.0	14:20 1.9	19:08 1.2
	W	28	2:55 3.0	10:14 0.9	16:38 2.0	21:32 1.1
	Th	29	4:13 3.2	11:28 0.7	17:37 2.3	22:55 0 7

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	5:17 3.5	12:16 0.4	18:19 2.6	23:52 0.3
	S	2	6:10 3.7	12:54 0.1	18:56 3.0	. . . . .
○	S	3	0:42 0.1	6:57 3.9	13:30 —0.1	19:31 3.3
E	M	4	1:25 —0.1	7:40 3.9	14:08 —0.2	20:05 3.5
	Tu	5	2:05 —0.2	8:20 3.8	14:38 —0.2	20:40 3.6
	W	6	2:45 —0.2	8:58 3.7	15:05 0.0	21:12 3.5
	Th	7	3:23 0.0	9:33 3.3	15:32 0.2	21:48 3.4
	F	8	4:00 0.2	10:07 3.0	15:57 0.4	22:25 3.3
	S	9	4:40 0.5	10:37 2.6	16:20 0.7	23:06 3.0
☾	S	10	5:25 0.8	11:02 2.2	16:49 1.0	23:59 2.8
S	M	11	6:29 1.1	11:27 2.0	17:17 1.2	. . . . .
	Tu	12	1:07 2.6	8:35 1.4	12:15 2.0	18:30 1.5
A	W	13	2:35 2.5	10:42 1.4	15:30 1.8	21:25 1.4
	Th	14	3:51 2.6	11:22 1.1	17:35 2.0	22:45 1.1
	F	15	4:58 2.8	12:04 0.8	18:12 2.3	23:34 0.9
	S	16	5:39 3.1	12:27 0.6	18:32 2.6	. . . . .
	S	17	0:12 0.6	6:18 3.3	12:50 0.3	18:55 2.9
●	M	18	0:44 0.4	6:56 3.4	13:15 0.2	19:20 3.1
E	Tu	19	1:15 0.2	7:27 3.5	13:41 0.1	19:46 3.3
	W	20	1:47 0.0	7:56 3.5	14:07 0.0	20:13 3.5
	Th	21	2:20 —0.1	8:32 3.5	14:32 0.1	20:43 3.5
	F	22	2:57 —0.1	9:08 3.3	15:09 0.2	21:18 3.5
	S	23	3:37 0.0	9:36 3.1	15:27 0.3	22:00 3.4
	S	24	4:21 0.2	10:10 2.8	15:55 0.6	22:47 3.2
N ☽	M	25	5:15 0.5	10:51 2.4	16:27 0.8	23:48 3.0
	Tu	26	6:28 0.8	11:51 2.1	17:14 1.1	. . . . .
	W	27	1:10 2.9	8:17 1.1	14:37 1.9	19:10 1.2
P	Th	28	2:42 2.9	10:06 1.0	16:22 2.1	21:34 1.0
	F	29	4:02 3.1	11:10 0.7	17:15 2.5	22:48 0.6
	S	30	5:06 3.3	11:53 0.4	17:52 2.8	23:43 0.3
	S	31	5:58 3.5	12:28 0.2	18:28 3.2	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon, for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	0:30 0.0	6:42 3.6	13:02 0.0	19:08 3.5
	Tu	2	1:10 −0.2	7:22 3.7	13:32 0.0	19:35 3.6
	W	3	1:48 −0.2	8:00 3.5	14:00 0.0	20:07 3.7
	Th	4	2:25 −0.2	8:34 3.3	14:27 0.1	20:39 3.7
	F	5	3:00 0.0	9:05 3.1	14:50 0.3	21:14 3.5
	S	6	3:35 0.2	9:38 2.8	15:15 0.5	21:50 3.3
	S	7	4:11 0.5	9:57 2.5	15:35 0.7	22:30 3.1
S	M	8	4:53 0.8	10:20 2.3	15:54 1:0	23:15 2.8
☾ A	Tu	9	5:45 1.0	10:51 2.0	16:15 1.2	. . . . .
	W	10	0:17 2.5	7:16 1.3	13:12 1.8	17:36 1.4
	Th	11	1:45 2.4	9:18 1.3	16:08 1.9	20:44 1.4
	F	12	3:12 2.5	10:26 1.1	16:50 2.1	22:12 1.1
	S	13	4:18 2.7	11:05 0.8	17:20 2.4	23:02 0.8
	S	14	5:08 2.9	11:37 0.6	17:45 2.8	23:43 0.5
E	M	15	5:50 3.1	12:07 0.4	18:13 3.1	. . . . .
	Tu	16	0:17 0.3	6:27 3.3	12:35 0.2	18:41 3.3
●	W	17	0:52 0.1	7:02 3.4	13:03 0.2	19:10 3.6
	Th	18	1:27 −0.1	7:37 3.5	13:32 0.1	19:44 3.7
	F	19	2:08 −0.2	8:12 3.3	14:00 0.2	20:20 3.8
	S	20	2:48 −0.2	8:47 3.1	14:28 0.3	21:00 3.7
	S	21	3:25 −0.1	9:22 2.9	14:58 0.5	21:44 3.5
N P	M	22	4:15 0.2	10:02 2.6	15:32 0.7	22:35 3.3
	Tu	23	5:10 0.5	10:54 2.3	16:15 0.9	23:38 3.1
☽	W	24	6:25 0.8	12:24 2.1	17:25 1.2	. . . . .
	Th	25	1:00 2.9	8:01 1.0	14:28 2.1	19:43 1.2
	F	26	2:27 2.8	9:30 0.9	15:47 2.3	21:27 0.9
	S	27	3:46 2.9	10:30 0.7	16:37 2.7	22:37 0.5
E	S	28	4:50 3.1	11:16 0.5	17:18 3.0	23:28 0.3
	M	29	5:42 3.2	11:54 0.3	17:58 3.3	. . . . .
	Tu	30	0:12 0.1	6:25 3.3	12:27 0.2	18:29 3.5

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	0:58 −0.1	7:03 3.2	12:57 0.2	19:02 3.7
	Th	2	1:30 −0.1	7:38 3.1	13:25 0.2	19:37 3.7
	F	3	2:05 0.0	8:10 3.0	13:50 0.3	20:11 3.7
	S	4	2:40 0.1	8:38 2.8	14:15 0.5	20:45 3.5
S	S	5	3:14 0.3	9:06 2.6	14:38 0.7	21:22 3.3
	M	6	3:50 0.5	9:35 2.4	15:00 0.8	22:00 3.1
A	Tu	7	4:50 0.7	10:07 2.3	15:29 1.0	22:43 2.8
	W	8	5:18 0.9	10:55 2.1	16:08 1.2	23:39 2.5
☾	Th	9	6:24 1.1	12:26 2.0	17:18 1.4	. . . . .
	F	10	0:53 2.5	7:48 1.1	14:22 2.1	19:35 1.4
	S	11	2:17 2.4	9:00 1.0	15:30 2.3	21:20 1.2
E	S	12	3:29 2.5	9:55 0.9	16:12 2.6	22:20 0.9
	M	13	4:37 2.7	10:38 0.7	16:50 2.9	23:05 0.5
	Tu	14	5:15 2.9	11:17 0.5	17:26 3.2	23:48 0.2
	W	15	5:58 3.0	11:52 0.4	18:04 3.5	. . . . .
●	Th	16	0:28 0.0	6:40 3.1	12:25 0.3	18:41 3.7
	F	17	1:10 −0.2	7:17 3.1	12:59 0.3	19:20 3.9
	S	18	1:52 −0.2	7:55 3.0	13:33 0.3	20:02 3.9
N P	S	19	2:36 −0.2	8:35 2.9	14:09 0.4	20:47 3.8
	M	20	3:22 0.0	9:18 2.7	14:50 0.5	21:35 3.6
	Tu	21	4:13 0.2	10:08 2.5	15:34 0.7	22:30 3.4
	W	22	5:10 0.4	11:12 2.4	16:32 0.9	23:33 3.1
☽	Th	23	6:15 0.7	12:32 2.3	17:58 1.0	. . . . .
	F	24	0:46 2.9	7:30 0.8	13:58 2.4	19:40 1.0
E	S	25	2:04 2.8	8:40 0.8	15:00 2.6	21:06 0.8
	S	26	3:22 2.7	9:42 0.7	15:52 2.8	22:15 0.6
	M	27	4:28 2.8	10:30 0.6	16:38 3.1	23:10 0.4
	Tu	28	5:21 2.8	11:12 0.5	17:20 3.3	23:58 0.3
	W	29	6:07 2.8	11:49 0.5	17:58 3.5	. . . . .
○	Th	30	0:38 0.2	6:45 2.8	12:23 0.5	18:35 3.6
	F	31	1:17 0.2	7:20 2.7	12:53 0.5	19:13 3.6

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	1:50 0.2	7:52 2.6	13:22 0.6	19:49 3.6
	S	2	2:25 0.3	8:22 2.5	13:49 0.7	20:24 3.5
	M	3	3:00 0.4	8:52 2.5	14:15 0.8	21:00 3.3
A	Tu	4	3:35 0.5	9:26 2.4	14:43 0.9	21:38 3.1
	W	5	4:13 0.6	10:05 2.3	15:22 1.0	22:21 2.9
	Th	6	4:55 0.7	10:53 2.3	16:10 1.1	23:07 2.7
☾	F	7	5:45 0.8	11:53 2.3	17:15 1.1	. . . . .
	S	8	0:05 2.6	6:39 0.9	13:05 2.3	18:40 1.2
E	S	9	1:12 2.5	7:38 0.9	14:10 2.5	20:15 1.1
	M	10	2:26 2.4	8:37 0.9	15:07 2.7	21:28 0.9
	Tu	11	3:38 2.5	9:32 0.8	16:00 3.0	22:28 0.6
	W	12	4:39 2.6	10:28 0.7	16:47 3.3	23:20 0.3
	Th	13	5:30 2.7	11:08 0.6	17:33 3.6	. . . . .
	F	14	0:10 0.1	6:17 2.8	11:52 0.5	18:18 3.8
● N	S	15	0:57 −0.1	7:02 2.8	12:37 0.4	19:04 3.9
P	S	16	1:42 −0.1	7:45 2.8	13:20 0.4	19:50 4.0
	M	17	2:30 −0.1	8:30 2.8	14:04 0.4	20:38 3.9
	Tu	18	3:17 −0.1	9:18 2.7	14:52 0.5	21:28 3.7
	W	19	4:05 0.1	10:10 2.7	15:43 0.6	22:22 3.5
	Th	20	4:58 0.3	11:05 2.6	16:43 0.7	23:18 3.2
☽ E	F	21	5:50 0.5	12:08 2.6	17:55 0.8	. . . . .
	S	22	0:21 2.9	6:47 0.7	13:05 2.7	19:15 0.8
	S	23	1:30 2.7	7:45 0.8	14:06 2.7	20:33 0.8
	M	24	2:50 2.5	8:45 0.8	15:06 2.9	21:51 0.8
	Tu	25	4:00 2.4	9:40 0.8	16:00 3.0	22:57 0.7
	W	26	5:02 2.4	10:30 0.8	16:50 3.2	23:50 0.6
	Th	27	5:55 2.4	11:15 0.7	17:33 3.4	. . . . .
	F	28	0:33 0.5	6:37 2.4	11:56 0.7	18:15 3.5
S ○	S	29	1:10 0.5	7:13 2.4	12:33 0.7	18:54 3.5
	S	30	1:43 0.4	7:45 2.4	13:06 0.7	19:32 3.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	2:14	8:13	13:37	20:08
			0.4	2.5	0.7	3.4
	Tu	2	2:45	8:45	14:08	20:45
			0.4	2.5	0.8	3.3
	W	3	3:17	9.17	14:40	21:20
			0.4	2.5	0.8	3.2
	Th	4	3:51	9:52	15:23	21:58
			0.4	2.6	0.8	3.1
	F	5	4:35	10:30	16:05	22:37
			0.5	2.6	0.8	2.9
E	S	6	5:02	11:15	16:57	23:20
			0.6	2.6	0.9	2.7
☾	S	7	5:42	12:06	18:00	. . .
			0.7	2.7	0.9	. . .
	M	8	0:18	6:25	13:07	19:15
			2.5	0.8	2.7	0.9
	Tu	9	1:21	7:17	14:12	20:40
			2.4	0.9	2.8	0.9
	W	10	2:48	8:22	15:16	21:57
			2.3	1.0	3.0	0.7
	Th	11	4:02	9:30	16:15	23:02
			2.3	0.9	3.3	0.5
	F	12	5:10	10:33	17:11	23:58
			2.4	0.8	3.6	0.3
N	S	13	6:07	11:32	18:08	. . .
			2.5	0.6	3.8	. . .
● P	S	14	0:50	6:54	12:25	18:53
			0.1	2.7	0.4	4.0
	M	15	1:36	7:39	13:15	19:42
			−0.1	2.8	0.3	4.1
	Tu	16	2:20	8:23	14:08	20:30
			−0.1	2.9	0.2	4.0
	W	17	3:03	9:07	14:50	21:17
			−0.1	3.0	0.2	3.8
	Th	18	3:45	9:52	15:40	22:05
			0.0	3.0	0.3	3.6
E	F	19	4:30	10:38	16:33	22:54
			0.1	3.0	0.4	3.2
	S	20	5:12	11:24	17:31	23:45
			0.3	3.0	0.6	2.9
☽	S	21	5:55	12:18	18:37	. . .
			0.6	2.9	0.8	. . .
	M	22	0:47	6:44	13:18	19:55
			2.5	0.8	2.8	0.9
	Tu	23	2:04	7:40	14:22	21:27
			2.2	1.0	2.8	1.0
	W	24	3:30	8:47	15:25	22:53
			2.1	1.1	2.9	1.0
	Th	25	4:58	9:53	16:28	23:54
			2.1	1.0	3.0	0.9
S	F	26	5:54	10:52	17:15	. . .
			2.1	0.9	3.1	. . .
	S	27	0:35	6:36	11:42	18:00
			0.8	2.2	0.8	3.3
	S	28	1:07	7:08	12:25	18:40
			0.6	2.3	0.7	3.4
♀ A	M	29	1:32	7:37	13:01	19:17
			0.5	2.5	0.7	3.5
	Tu	30	1:59	8:02	13:33	19:53
			0.4	2.6	0.6	3.5
	W	31	2:25	8:28	14:02	20:25
			0.3	2.7	0.6	3.4

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:52	8:55	14:34	21:00
			0.2	2.8	0.6	3.3
E	F	2	3:20	9:25	15:10	21:31
			0.2	2.9	0.5	3.2
	S	3	3:50	9:58	15:48	22:05
			0.3	2.9	0.5	3.0
	S	4	4:18	10:35	16:32	22:45
			0.4	3.0	0.6	2.8
	M	5	4:51	11:20	17:25	23:27
			0.5	2.9	0.7	2.6
☾	Tu	6	5:25	12:18	18:33	. . .
			0.7	2.9	0.8	. . .
	W	7	0:22	6:10	13:28	20:02
			2.3	0.9	2.9	0.9
	Th	8	1:48	7:14	14:43	21:37
			2.1	1.1	3.0	0.9
N	F	9	3:43	8:50	15:55	22:55
			2.1	1.1	3.2	0.7
	S	10	5:05	10:20	16:57	23:54
			2.2	0.8	3.5	0.4
	S	11	6:01	11:27	17:52	. . .
			2.5	0.5	3.8	. . .
P ●	M	12	0:42	6:46	12:21	18:43
			0.2	2.7	0.3	4.0
	Tu	13	1:24	7:27	13:10	19:30
			0.0	3.0	0.1	4.1
	W	14	1:53	8:05	13:58	20:13
			−0.1	3.2	−0.1	4.0
E	Th	15	2:40	8:44	14:40	20:59
			−0.2	3.3	−0.1	3.8
	F	16	3:17	9:22	15:24	21:40
			−0.1	3.4	0.0	3.5
	S	17	3:52	10:02	16:10	22:22
			0.1	3.3	0.2	3.2
	S	18	4:37	10:43	16:58	23:05
			0.3	3.2	0.4	2.8
☽	M	19	4:59	11:32	17:55	23:54
			0.6	3.0	0.7	2.4
	Tu	20	5:37	12:30	19:10	. . .
			0.9	2.9	1.1	. . .
	W	21	1:08	6:23	13:38	21:03
			2.0	1.2	2.7	1.2
S	Th	22	3:05	7:45	14:53	23:02
			1.8	1.3	2.7	1.2
	F	23	5:05	9:29	16:08	23:56
			1.9	1.2	2.8	1.0
	S	24	5:57	10:41	17:00	. . .
			2.1	1.0	3.0	. . .
A	S	25	0:25	6:27	11:35	17:45
			0.8	2.3	0.8	3.1
	M	26	0:49	6:50	12:17	18:27
			0.6	2.5	0.7	3.3
○	Tu	27	1:10	7:13	12:50	19:00
			0.4	2.6	0.5	3.4
	W	28	1:32	7:36	13:22	19:33
			0.3	2.8	0.4	3.5
E	Th	29	1:56	8:00	13:49	20:03
			0.2	3.0	0.3	3.4
	F	30	2:19	8:25	14:18	20:33
			0.1	3.1	0.3	3.4
	S	31	2:44	8:52	14:51	21:05
			0.1	3.2	0.2	3.3

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:10	9:23	15:27	21:37
			0.2	3.3	0.2	3.1
	M	2	3:37	9:58	16:09	22:09
			0.3	3.2	0.3	2.9
	Tu	3	4:07	10:45	17:00	22:47
			0.5	3.1	0.5	2.6
☾	W	4	4:37	11:40	18:05	23:35
			0.7	3.0	0.7	2.3
N	Th	5	5:15	12:53	19:39	. . .
			1.0	2.9	1.0	. . .
	F	6	1:14	6:22	14:20	21:30
			1.9	1.2	2.9	1.0
	S	7	3:51	8:43	15:41	22:51
			2.0	1.1	3.1	0.8
	S	8	5:03	10:21	16:48	23:41
			2.2	0.8	3.4	0.5
P	M	9	5:49	11:24	17:43	. . .
			2.6	0.4	3.6	. . .
●	Tu	10	0:26	6:28	12:15	18:32
			0.2	2.9	0.1	3.8
E	W	11	1:02	7:05	13:00	19:15
			0.0	3.2	−0.2	3.9
	Th	12	1:37	7:40	13:41	19:57
			−0.1	3.5	−0.3	3.8
	F	13	2:10	8:15	14:22	20:35
			−0.2	3.6	−0.3	3.7
	S	14	2:42	8:48	15:02	21:14
			−0.1	3.6	−0.2	3.4
	S	15	3:12	9:24	15:44	21:50
			0.1	3.5	0.1	3.0
	M	16	3:40	10:05	16:25	22:04
			0.4	3.4	0.4	2.6
	Tu	17	4:08	10:49	17:13	22:58
			0.6	3.1	0.7	2.3
☽ S	W	18	4:31	11:43	18:18	23:45
			0.9	2.9	1.1	1.9
	Th	19	4:57	12:52	20:15	. . .
			1.2	2.6	1.3	. . .
	F	20	2:35	5:44	13:19	22:45
			1.7	1.5	2.5	1.3
A	S	21	5:11	9:15	15:38	23:24
			1.8	1.3	2.6	1.1
	S	22	5:35	10:32	16:40	23:50
			2.1	1.1	2.8	0.8
	M	23	5:55	11:21	17:27	. . .
			2.4	0.8	3.0	. . .
	Tu	24	0:10	6:16	12:00	18:05
			0.6	2.6	0.6	3.2
	W	25	0:33	6:38	12:30	18:37
			0.4	2.9	0.4	3.3
E ○	Th	26	0:55	7:00	13:00	19:09
			0.2	3.1	0.2	3.4
	F	27	1:20	7:26	13:27	19:40
			0.1	3.3	0.1	3.4
	S	28	1:43	7:52	14:00	20:10
			0.1	3.4	0.0	3.4
	S	29	2:08	8:20	14:34	20:40
			0.1	3.5	0.0	3.2
	M	30	2:34	8:53	15:12	21:11
			0.2	3.5	0.0	3.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	3:00	9:32	15:55	21:45
			0.4	3.4	0.2	2.8
	W	2	3:27	10:17	16:45	22:25
			0.5	3.3	0.4	2.5
N	Th	3	3:58	11:15	17:52	23:18
☾			0.8	3.0	0.7	2.1
	F	4	4:40	12:32	19:30	. . .
			1.1	2.8	1.0	. . .
	S	5	1:37	6:15	14:06	21:20
			1.9	1.3	2.9	1.0
	S	6	3:45	8:55	15:30	22:34
			2.1	1.1	3.0	0.8
P	M	7	4:42	10:18	16:37	23:22
			2.4	0.7	3.2	0.5
	Tu	8	5:23	11:16	17:30	23:58
			2.8	0.3	3.4	0.2
E	W	9	6:00	12:03	18:17	. . .
			3.2	0.0	3.6	. . .
●	Th	10	0:35	6:35	12:45	18:58
			0.1	3.5	—0.2	3.6
	F	11	1:07	7:10	13:25	19:38
			0.0	3.7	—0.3	3.6
	S	12	1:37	7:42	14:08	20:13
			0.0	3.8	—0.3	3.4
	S	13	2:06	8:18	14:41	20:46
			0.1	3.8	—0.1	3.1
	M	14	2:33	8:53	15:18	21:18
			0.3	3.7	0.1	2.8
	Tu	15	3:00	9:32	15:58	21:48
			0.5	3.4	0.4	2.5
S	W	16	3:22	10:13	16:40	22:18
			0.7	3.2	0.7	2.2
☽	Th	17	3:44	11:01	17:36	23:01
			1.0	2.8	1.0	2.0
	F	18	4:08	12:05	19:07	. . .
			1.2	2.6	1.3	. . .
A	S	19	1:15	5:24	13:32	21:02
			1.8	1.5	2.4	1.3
	S	20	3:58	8:47	14:59	22:10
			1.9	1.4	2.5	1.1
	M	21	4:38	10:06	16:07	22:50
			2.2	1.1	2.6	0.9
	Tu	22	5:04	10:55	16:55	23:20
			2.5	0.9	2.8	0.7
E	W	23	5:30	11:30	17:36	23:48
			2.8	0.6	3.0	0.5
	Th	24	5:56	12:03	18:13	. . .
			3.1	0.3	3.1	. . .
○	F	25	0:15	6:22	12:35	18:45
			0.3	3.3	0.1	3.2
	S	26	0:41	6:50	13:08	19:17
			0.2	3.5	—0.1	3.3
	S	27	1:08	7:22	13:43	19:49
			0.2	3.7	—0.2	3.2
	M	28	1:35	7:56	14:20	20:21
			0.2	3.8	—0.2	3.1
	Tu	29	2:02	8:33	15:02	20:56
			0.3	3.7	—0.1	2.9
N	W	30	2:31	9:16	15:48	21:34
			0.4	3.6	0.1	2.6
	Th	31	3:04	10:05	16:40	22:21
			0.5	3.3	0.4	2.4

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	3:45	11:04	17:47	23:34
			0.9	3.1	0.7	2.1
	S	2	4:47	12:20	19:15	. . .
			1.1	2.9	0.9	. . .
P	S	3	1:40	6:49	13:50	20:46
			2.1	1.2	2.8	0.9
	M	4	3:12	8:50	15:12	21:55
			2.3	1.0	2.8	0.7
E	Tu	5	4:06	10:06	16:20	22:45
			2.6	0.6	3.0	0.5
	W	6	4:50	11:01	17:17	23:27
			3.0	0.3	3.1	0.4
	Th	7	5:28	11:48	18:02	. . .
			3.3	0.1	3.2	. . .
●	F	8	0:02	6:04	12:31	18:42
			0.2	3.6	—0.1	3.2
	S	9	0:35	6:40	13:10	19:18
			0.2	3.8	—0.1	3.1
	S	10	1:07	7:16	13:48	19:52
			0.2	3.9	—0.1	3.0
	M	11	1:33	7:52	14:24	20:23
			0.3	3.8	0.0	2.8
S	Tu	12	2:00	8:30	15:00	20:54
			0.4	3.7	0.2	2.6
	W	13	2:27	9:06	15:37	21:25
			0.6	3.5	0.4	2.4
	Th	14	2:52	9:46	16:18	22:02
			0.8	3.2	0.6	2.3
	F	15	3:20	10:30	17:06	22:51
			1.0	2.9	0.9	2.1
A	S	16	4:01	11:22	18:07	. . .
☽			1.2	2.6	1.0	. . .
	S	17	0:06	5:07	12:32	19:26
			2.0	1.4	2.4	1.1
	M	18	2:08	7:27	13:57	20:40
			2.1	1.4	2.4	1.1
E	Tu	19	3:12	9:11	15:13	21:36
			2.3	1.2	2.4	1.0
	W	20	3:58	10:10	16:13	22:20
			2.5	1.0	2.6	0.8
	Th	21	4:34	10:58	17:01	22:57
			2.8	0.8	2.7	0.6
	F	22	5:10	11:33	17:22	23:31
			3.1	0.4	2.9	0.5
	S	23	5:45	12:12	18:20	. . .
			3.4	0.1	2.9	. . .
○	S	24	0:05	6:22	12:50	18:56
			0.4	3.7	0.0	3.0
	M	25	0:38	7:00	13:30	19:33
			0.3	3.8	—0.2	2.9
N	Tu	26	1:10	7:40	14:13	20:10
			0.3	3.9	—0.2	2.9
	W	27	1:45	8:22	14:57	20:52
			0.4	3.8	—0.1	2.7
P	Th	28	2:22	9:08	15:45	21:37
			0.5	3.7	0.1	2.6
	F	29	3:06	10:00	16:37	22:32
			0.6	3.5	0.3	2.4
	S	30	4:00	10:57	17:36	23:45
			0.8	3.2	0.6	2.3

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	5:12	12:05	18:45	. . .
			1.0	2.9	0.8	. . .
E	M	2	1:08	6:50	13:22	19:57
			2.4	1.0	2.7	0.8
	Tu	3	2:17	8:25	14:45	21:08
			2.5	0.9	2.7	0.8
	W	4	3:20	9:43	16:00	22:00
			2.7	0.7	2.7	0.7
	Th	5	4:10	10:45	17:00	22:46
			3.0	0.5	2.7	0.6
	F	6	4:55	11:38	17:48	23:30
			3.3	0.3	2.7	0.5
	S	7	5:40	12:22	18:30	. . .
			3.5	0.2	2.7	. . .
●	S	8	0:05	6:18	13:02	19:07
			0.4	3.7	0.2	2.7
S	M	9	0:40	6:57	13:40	19:40
			0.4	3.8	0.2	2.7
	Tu	10	1:12	7:35	14:15	20:12
			0.5	3.7	0.2	2.6
	W	11	1:43	8:13	14:47	20:43
			0.6	3.6	0.3	2.5
	Th	12	2:13	8:48	15:23	21:18
			0.7	3.4	0.4	2.5
	F	13	2:42	9:27	16:00	21:55
			0.8	3.2	0.5	2.4
A	S	14	3:17	10:05	16:37	22:37
			0.9	3.0	0.6	2.4
	S	15	4:00	10:47	17:20	23:28
			1.0	2.8	0.8	2.3
☽	M	16	4:55	11:36	18:10	. . .
			1.1	2.5	0.9	. . .
E	Tu	17	0:32	6:10	12:37	19:02
			2.3	1.2	2.4	1.0
	W	18	1:40	7:42	13:53	20:03
			2.4	1.2	2.3	1.0
	Th	19	2:42	9:06	15:15	21:05
			2.6	1.0	2.3	0.9
	F	20	3:38	10:11	16:19	21:59
			2.8	0.8	2.4	0.8
	S	21	4:28	11:05	17:13	22:48
			3.1	0.5	2.5	0.7
	S	22	5:15	11:54	18:02	23:34
			3.4	0.3	2.6	0.6
N	M	23	6:01	12:40	18:45	. . .
			3.7	0.1	2.7	. . .
○	Tu	24	0:18	6:45	13:24	19:27
			0.5	3.9	—0.1	2.8
P	W	25	1:02	7:30	14:09	20:10
			0.4	4.0	—0.2	2.8
	Th	26	1:44	8:17	14:52	20:52
			0.4	4.0	—0.1	2.8
	F	27	2:30	9:04	15:38	21:38
			0.4	3.9	0.0	2.8
	S	28	3:18	9:52	16:24	22:29
			0.4	3.6	0.1	2.8
	S	29	4:10	10:45	17:12	23:23
			0.5	3.3	0.3	2.7
E	M	30	5:12	11:40	18:04	. . .
☾			0.7	3.0	0.6	. . .
	Tu	31	0:20	6:25	12:45	18:59
			2.7	0.8	2.7	0.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	4:32 5.1	11:12 0.1	17:15 4.4	23:17 0.8
	Tu	2	5:30 5.3	12:07 −0.2	18:18 4.7	. . . . .
N	W	3	0:16 0.7	6:28 5.5	13:00 −0.4	19:14 4.9
○ P	Th	4	1:13 0.6	7:21 5.7	13:52 −0.6	20:08 5.1
	F	5	2:08 0.5	8:15 5.7	14:45 −0.7	21:00 5.2
	S	6	3:03 0.5	9:05 5.7	15:37 −0.6	21:48 5.3
	S	7	4:01 0.5	9:56 5.6	16:30 −0.5	22:39 5.3
	M	8	5:00 0.6	10:47 5.3	17:24 −0.3	23:30 5.2
E	Tu	9	6:01 0.6	11:40 5.0	18:20 0.0	. . . . .
	W	10	0:20 5.0	7:04 0.7	12:35 4.6	19:18 0.3
☾	Th	11	1:14 4.9	8:05 0.8	13:35 4.3	20:15 0.6
	F	12	2:09 4.7	9:05 0.8	14:42 4.0	21:16 0.9
	S	13	3:05 4.5	10:04 0.8	15:58 3.8	22:16 1.1
	S	14	4:01 4.5	11:00 0.7	17:14 3.7	23:14 1.2
	M	15	4:56 4.5	11:49 0.6	18:17 3.8	. . . . .
	Tu	16	0:07 1.3	5:48 4.5	12:34 0.5	19:08 3.9
S A	W	17	0:55 1.3	6:33 4.6	13:14 0.4	19:40 4.0
	Th	18	1:35 1.3	7:14 4.7	13:52 0.3	20:10 4.1
●	F	19	2:12 1.3	7:52 4.8	14:26 0.2	20:39 4.3
	S	20	2:40 1.3	8:28 4.8	15:00 0.2	21:08 4.5
	S	21	3:08 1.3	9:04 4.8	15:33 0.3	21:40 4.7
	M	22	3:38 1.2	9:49 4.8	16:05 0.3	22:13 4.8
	Tu	23	4:13 1.1	10:15 4.7	16:38 0.5	22:49 4.9
E	W	24	4:54 1.0	10:54 4.7	17:14 0.6	23:31 5.0
	Th	25	5:40 0.9	11:36 4.6	17:50 0.8	. . . . .
	F	26	0:14 5.0	6:34 0.9	12:21 4.4	18:35 1.0
☽	S	27	1:01 4.9	7:35 0.9	13:15 4.3	19:27 1.2
	S	28	1:55 4.8	8:40 0.8	14:20 4.1	20:31 1.3
	M	29	2:55 4.8	9:46 0.6	15:35 4.0	21:44 1.3
	Tu	30	4:01 4.8	10:50 0.4	16:54 4.1	23:01 1.1
N	W	31	5:07 5.0	11:49 0.1	18:04 4.4	. . . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	0:07 0.9	6:10 5.3	12:45 −0.2	19:08 4.8
○	F	2	1:07 0.6	7:09 5.5	13:39 −0.5	19:54 5.1
	S	3	2:01 0.4	8:01 5.7	14:29 −0.6	20:43 5.4
	S	4	2:52 0.3	8:52 5.7	15:19 −0.6	21:30 5.5
	M	5	3:45 0.2	9:40 5.7	16:07 −0.5	22:15 5.5
E	Tu	6	4:36 0.2	10:28 5.4	16:56 −0.2	23:00 5.5
	W	7	5:30 0.3	11:15 5.1	17:46 0.1	23:45 5.3
	Th	8	6:24 0.5	12:04 4.7	18:39 0.5	. . . . .
☾	F	9	0:32 5.0	7:21 0.7	12:56 4.3	19:35 0.9
	S	10	1:22 4.7	8:22 0.8	13:57 3.9	20:38 1.2
	S	11	2:16 4.4	9:28 0.9	15:14 3.6	21:44 1.4
	M	12	3:16 4.2	10:22 0.9	16:41 3.5	22:48 1.5
S	Tu	13	4:18 4.2	11:18 0.8	17:52 3.6	23:45 1.4
A	W	14	5:16 4.3	12:04 0.7	18:49 3.8	. . . . .
	Th	15	0:34 1.4	6:07 4.4	12:48 0.5	19:14 4.0
	F	16	1:14 1.3	6:51 4.6	13:25 0.4	19:43 4.3
	S	17	1:49 1.1	7:32 4.8	14:00 0.2	20:11 4.5
●	S	18	2:16 1.0	8:10 4.9	14:32 0.2	20:40 4.8
	M	19	2:46 0.8	8:45 5.0	15:05 0.2	21:12 5.0
E	Tu	20	3:19 0.7	9:20 5.0	15:36 0.2	21:46 5.2
	W	21	3:54 0.6	9:57 5.0	16:08 0.4	22:22 5.3
	Th	22	4:32 0.5	10:55 4.9	16:40 0.6	23:00 5.2
	F	23	5:16 0.6	11:13 4.8	17:16 0.8	23:40 5.1
	S	24	6:08 0.6	11:59 4.5	17:58 1.1	. . . . .
☽	S	25	0:28 4.9	7:07 0.8	12:52 4.3	18:52 1.3
	M	26	1:21 4.7	8:15 0.8	13:59 4.0	20:08 1.5
N	Tu	27	2:25 4.5	9:26 0.8	15:19 3.9	21:35 1.5
	W	28	3:40 4.5	10:34 0.6	16:44 4.0	22:58 1.3
	Th	29	4:58 4.7	11:36 0.3	17:54 4.4	. . . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:05 0.9	6:00 5.0	12:31 0.0	18:50 4.8
	S	2	1:01 0.6	6:57 5.3	13:22 −0.3	19:39 5.2
○	S	3	1:48 0.3	7:48 5.5	14:10 −0.4	20:22 5.5
E	M	4	2:36 0.0	8:36 5.6	14:56 −0.5	21:05 5.7
	Tu	5	3:33 −0.1	9:21 5.6	15:41 −0.3	21:46 5.7
	W	6	4:10 0.0	10:05 5.4	16:25 0.0	22:28 5.5
	Th	7	4:56 0.1	10:48 5.1	17:11 0.4	23:08 5.3
	F	8	5:45 0.3	11:31 4.7	17:59 0.8	23:50 4.9
	S	9	6:39 0.6	12:20 4.2	18:53 1.3	. . . . .
☾	S	10	0:55 4.6	7:37 0.8	13:16 3.9	19:58 1.6
S	M	11	1:28 4.2	8:40 1.0	14:25 3.5	21:10 1.7
	Tu	12	2:26 4.0	9:41 1.0	15:49 3.4	22:19 1.7
A	W	13	3:34 3.9	10:38 1.0	17:02 3.6	23:16 1.6
	Th	14	4:40 4.0	11:28 0.8	17:52 3.8	. . . . .
	F	15	0:02 1.4	5:36 4.8	12:11 0.6	18:28 4.2
	S	16	0:41 1.1	6:25 4.5	12:50 0.4	19:02 4.6
	S	17	1:14 0.9	7:06 4.8	13:25 0.3	19:35 4.9
●	M	18	1:45 0.6	7:44 5.0	13:59 0.2	20:08 5.2
E	Tu	19	2:19 0.3	8:22 5.1	14:32 0.2	20:42 5.4
	W	20	2:55 0.2	9:00 5.2	15:05 0.2	21:18 5.5
	Th	21	3:32 0.1	9:38 5.2	15:38 0.4	21:54 5.4
	F	22	4:13 0.1	10:15 5.0	16:13 0.6	22:34 5.3
	S	23	4:56 0.3	10:57 4.8	16:54 0.9	23:16 5.1
	S	24	5:50 0.5	11:45 4.5	17:41 1.2	. . . . .
N ☽	M	25	0:04 4.8	6:51 0.7	12:42 4.2	18:45 1.6
	Tu	26	1:00 4.5	8:01 0.8	13:52 4.0	20:17 1.7
	W	27	2:08 4.3	9:14 0.8	15:14 3.9	21:49 1.5
P	Th	28	3:27 4.2	10:22 0.6	16:35 4.1	23:01 1.2
	F	29	4:44 4.4	11:22 0.4	17:38 4.5	23:56 0.8
	S	30	5:49 4.8	12:16 0.1	18:30 4.9	. . . . .
	S	31	0:48 0.4	6:44 5.1	13:03 0.0	19:15 5.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	1:32 0.1	7:32 5.3	13:48 −0.1	19:58 5.5
	Tu	2	2:16 −0.1	8:18 5.4	14:31 −0.1	20:37 5.6
	W	3	2:59 −0.2	9:00 5.3	15:13 0.1	21:16 5.6
	Th	4	3:41 −0.1	9:40 5.1	15:54 0.4	21:54 5.4
	F	5	4:25 0.0	10:21 4.8	16:35 0.8	22:31 5.1
	S	6	5:11 0.3	11:08 4.5	17:21 1.2	23:12 4.8
	S	7	6:00 0.6	11:49 4.2	18:10 1.6	23:54 4.5
S	M	8	6:55 0.8	12:40 3.9	19:14 1.8	. . . . .
☾ A	Tu	9	0:41 4.1	7:54 1.0	13:40 3.7	20:30 1.9
	W	10	1:38 3.9	8:54 1.1	14:50 3.6	21:40 1.8
	Th	11	2:44 3.8	9:50 1.0	15:56 3.7	22:34 1.6
	F	12	3:52 3.9	10:40 0.9	16:50 4.1	23:19 1.3
	S	13	4:55 4.2	11:25 0.7	17:34 4.4	23:56 1.0
	S	14	5:46 4.4	12:05 0.5	18:15 4.8	. . . . .
E	M	15	0:32 0.6	6:32 4.7	12:42 0.4	18:54 5.2
	Tu	16	1:10 0.2	7:15 5.0	13:20 0.3	19:32 5.4
●	W	17	1:49 0.0	7:57 5.2	13:57 0.3	20:10 5.6
	Th	18	2:29 −0.2	8:36 5.2	14:34 0.3	20:50 5.6
	F	19	3:11 −0.3	9:17 5.2	15:12 0.5	21:30 5.5
	S	20	3:56 −0.2	10:01 5.0	15:55 0.7	22:13 5.3
	S	21	4:45 0.0	10:48 4.8	16:44 1.1	22:58 5.0
N P	M	22	5:41 0.3	11:40 4.5	17:44 1.4	23:50 4.7
	Tu	23	6:44 0.6	12:40 4.3	19:05 1.6	. . . . .
☽	W	24	0:49 4.4	7:58 0.7	13:52 4.1	20:36 1.5
	Th	25	2:00 4.2	9:02 0.7	15:08 4.1	21:52 1.3
	F	26	3:19 4.1	10:07 0.6	16:17 4.3	22:54 1.0
	S	27	4:34 4.3	11:08 0.5	17:14 4.7	23:45 0.7
E	S	28	5:37 4.5	11:55 0.3	18:02 5.0	. . . . .
	M	29	0:30 0.3	6:30 4.8	12:42 0.3	18:48 5.2
	Tu	30	1:13 0.1	7:18 4.9	13:26 0.3	19:28 5.4

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:55 −0.1	8:01 4.9	14:06 0.4	20:07 5.4
	Th	2	2:35 −0.1	8:40 4.8	14:46 0.6	20:45 5.3
	F	3	3:16 0.0	9:20 4.7	15:25 0.9	21:24 5.2
	S	4	3:57 0.1	10:00 4.5	16:04 1.2	22:01 4.9
	S	5	4:41 0.3	10:40 4.3	16:44 1.5	22:38 4.7
	M	6	5:27 0.6	11:21 4.2	17:30 1.7	23:18 4.4
A	Tu	7	6:16 0.8	12:08 4.0	18:13 1.9	. . . . .
	W	8	0:02 4.1	7:08 1.0	13:00 3.9	19:38 1.9
☾	Th	9	0:54 4.0	8:08 1.0	13:56 3.9	20:45 1.8
	F	10	1:54 3.9	8:56 1.0	14:55 4.1	21:38 1.5
	S	11	3:00 3.9	9:45 0.9	15:50 4.4	22:26 1.2
E	S	12	4:08 4.1	10:31 0.8	16:40 4.7	23:10 0.8
	M	13	5:02 4.4	11:15 0.7	17:26 5.0	23:52 0.4
	Tu	14	5:54 4.6	12:00 0.5	18:12 5.3	. . . . .
	W	15	0:36 0.0	6:42 4.9	12:48 0.4	18:56 5.6
●	Th	16	1:20 −0.3	7:30 5.1	13:25 0.4	19:40 5.7
	F	17	2:06 −0.4	8:14 5.1	14:08 0.5	20:26 5.7
	S	18	2:58 −0.5	9:01 5.1	14:55 0.6	21:10 5.6
N P	S	19	3:42 −0.4	9:50 5.0	15:45 0.8	21:58 5.4
	M	20	4:35 −0.2	10:40 4.9	16:45 1.1	22:48 5.1
	Tu	21	5:32 0.1	11:36 4.7	17:56 1.3	23:42 4.8
	W	22	6:35 0.3	12:37 4.5	19:15 1.3	. . . . .
☽	Th	23	0:42 4.5	7:40 0.4	13:42 4.4	20:30 1.2
	F	24	1:50 4.2	8:43 0.5	14:48 4.5	21:38 1.0
E	S	25	3:04 4.2	9:44 0.6	15:48 4.6	22:34 0.8
	S	26	4:16 4.2	10:40 0.6	16:43 4.8	23:24 0.6
	M	27	5:20 4.3	11:32 0.6	17:34 4.9	. . . . .
	Tu	28	0:10 0.4	6:16 4.4	12:20 0.6	18:20 5.1
	W	29	0:58 0.2	7:04 4.4	13:07 0.7	19:02 5.1
○	Th	30	1:35 0.1	7:48 4.4	13:50 0.9	19:42 5.1
	F	31	2:15 0.1	8:26 4.4	14:29 1.1	20:20 5.1

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	2:55 0.1	9:05 4.3	15:05 1.3	20:58 4.9
	S	2	3:36 0.2	9:42 4.3	15:42 1.5	21:34 4.8
	M	3	4:16 0.3	10:18 4.2	16:18 1.6	22:12 4.6
A	Tu	4	4:57 0.5	10:57 4.2	16:59 1.7	22:50 4.4
	W	5	5:40 0.7	11:39 4.2	17:49 1.8	23:31 4.2
	Th	6	6:26 0.9	12:22 4.3	18:45 1.7	. . . . .
☾	F	7	0:17 4.1	7:10 1.0	13:11 4.3	19:44 1.6
	S	8	1:10 4.1	7:58 1.0	14:02 4.5	20:40 1.3
E	S	9	2:10 4.1	8:46 1.0	14:55 4.7	21:33 1.0
	M	10	3:12 4.2	9:35 0.9	15:47 4.8	22:25 0.6
	Tu	11	4:15 4.3	10:25 0.9	16:41 5.1	23:14 0.3
	W	12	5:15 4.5	11:18 0.7	17:32 5.3	. . . . .
	Th	13	0:05 −0.1	6:12 4.7	12:09 0.7	18:24 5.5
	F	14	0:54 −0.3	7:05 4.9	13:00 0.6	19:16 5.7
● N	S	15	1:45 −0.5	7:57 5.0	13:52 0.6	20:06 5.7
P	S	16	2:36 −0.6	8:48 5.1	14:44 0.7	20:55 5.6
	M	17	3:28 −0.5	9:39 5.1	15:42 0.8	21:47 5.5
	Tu	18	4:22 −0.4	10:32 5.1	16:45 0.9	22:38 5.3
	W	19	5:18 −0.2	11:25 5.0	17:52 0.9	23:32 5.0
	Th	20	6:17 0.0	12:20 4.9	19:00 0.9	. . . . .
☽ E	F	21	0:30 4.7	7:17 0.2	13:18 4.8	20:06 0.9
	S	22	1:32 4.4	8:17 0.4	14:16 4.7	21:09 0.8
	S	23	2:40 4.2	9:17 0.6	15:13 4.7	22:06 0.7
	M	24	3:58 4.0	10:14 0.8	16:09 4.7	22:59 0.6
	Tu	25	5:01 4.0	11:10 0.9	17:02 4.7	23:49 0.5
	W	26	6:08 4.0	12:02 1.0	17:52 4.8	. . . . .
	Th	27	0:35 0.4	6:56 4.1	12:52 1.1	18:37 4.8
	F	28	1:17 0.3	7:40 4.1	13:36 1.2	19:20 4.9
S ○	S	29	1:58 0.2	8:18 4.1	14:18 1.3	20:00 4.9
	S	30	2:37 0.2	8:52 4.1	14:54 1.4	20:38 4.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	M.	Time and Height of High and Low Water.			
A	M	1	3:15 0.2	9:24 4.2	15:25 1.5	21:14 4.7
	Tu	2	3:51 0.3	9:56 4.3	15:57 1.5	21:49 4.6
	W	3	4:28 0.5	10:30 4.4	16:32 1.5	22:26 4.5
	Th	4	5:08 0.6	11:06 4.5	17:13 1.4	23:05 4.4
	F	5	5:40 0.7	11:47 4.6	18:00 1.4	23:47 4.3
E	S	6	6:18 0.9	12:30 4.7	18:58 1.2	. . . . .
☾	S	7	0:33 4.3	7:00 1.0	13:17 4.8	19:50 1.1
	M	8	1:25 4.2	7:48 1.1	14:07 4.8	20:46 0.9
	Tu	9	2:24 4.2	8:40 1.1	15:02 4.9	21:45 0.6
	W	10	3:30 4.2	9:40 1.1	16:00 5.0	22:43 0.3
	Th	11	4:40 4.3	10:45 1.0	17:00 5.2	23:38 0.0
	F	12	5:45 4.5	11:44 0.9	17:58 5.3	. . . . .
N	S	13	0:33 −0.3	6:46 4.7	12:44 0.7	18:55 5.5
● P	S	14	1:27 −0.5	7:40 5.0	13:41 0.6	19:49 5.7
	M	15	2:20 −0.6	8:34 5.2	14:36 0.5	20:42 5.7
	Tu	16	3:12 −0.6	9:24 5.3	15:34 0.4	21:33 5.6
	W	17	4:04 −0.5	10:14 5.3	16:32 0.5	22:24 5.5
	Th	18	4:57 −0.4	11:04 5.3	17:31 0.5	23:16 5.2
E	F	19	5:51 −0.1	11:54 5.2	18:31 0.6	. . . . .
	S	20	0:09 4.8	6:48 0.2	12:46 5.1	19:32 0.6
☽	S	21	1:05 4.5	7:46 0.5	13:40 4.9	20:33 0.7
	M	22	2:10 4.1	8:47 0.8	14:35 4.7	21:34 0.7
	Tu	23	3:24 3.9	9:48 1.0	15:32 4.5	22:32 0.7
	W	24	4:42 3.8	10:50 1.2	16:30 4.5	23:26 0.6
	Th	25	5:54 3.8	11:47 1.2	17:26 4.5	. . . . .
S	F	26	0:15 0.5	6:49 3.9	12:40 1.3	18:16 4.6
	S	27	1:00 0.4	7:30 4.0	13:24 1.3	19:02 4.7
	S	28	1:39 0.3	8:04 4.1	14:05 1.3	19:42 4.7
○ A	M	29	2:16 0.3	8:32 4.2	14:36 1.3	20:18 4.8
	Tu	30	2:50 0.3	9:00 4.4	15:04 1.3	20:54 4.8
	W	31	3:28 0.3	9:28 4.6	15:34 1.2	21:29 4.8

AUGUST.

Moon.	Day of— W.	M.	Time and Height of High and Low Water.			
	Th	1	3:55 0.4	10:00 4.7	16:04 1.1	22:03 4.7
E	F	2	4:25 0.5	10:33 4.9	16:41 1.0	22:39 4.6
	S	3	4:56 0.7	11:12 4.9	17:22 0.9	23:18 4.6
	S	4	5:30 0.8	11:52 4.9	18:11 0.9	23:59 4.5
	M	5	6:08 1.0	12:35 4.9	19:07 0.9	. . . . .
☾	Tu	6	0:49 4.8	6:55 1.2	13:25 4.8	20:09 0.8
	W	7	1:49 4.2	7:55 1.3	14:22 4.8	21:14 0.7
	Th	8	2:58 4.1	9:05 1.3	15:26 4.8	22:18 0.5
N	F	9	4:15 4.1	10:22 1.2	16:34 4.9	23:18 0.2
	S	10	5:28 4.3	11:33 1.0	17:40 5.1	. . . . .
	S	11	0:15 −0.1	6:32 4.7	12:36 0.7	18:40 5.4
P ●	M	12	1:10 −0.4	7:26 5.0	13:32 0.4	19:35 5.6
	Tu	13	2:01 −0.6	8:16 5.3	14:23 0.2	20:27 5.7
	W	14	2:51 −0.6	9:08 5.6	15:16 0.1	21:16 5.7
E	Th	15	3:41 −0.5	9:49 5.6	16:08 0.1	22:05 5.6
	F	16	4:30 −0.3	10:35 5.6	17:02 0.1	22:53 5.3
	S	17	5:20 0.0	11:21 5.4	17:57 0.3	23:41 4.9
	S	18	6:14 0.4	12:09 5.2	18:55 0.5	. . . . .
☽	M	19	0:34 4.5	7:12 0.8	12:59 4.8	19:56 0.7
	Tu	20	1:35 4.0	8:16 1.2	13:54 4.5	21:00 0.8
	W	21	2:50 3.7	9:25 1.3	14:55 4.3	22:02 0.8
S	Th	22	4:18 3.6	10:32 1.4	15:59 4.2	22:59 0.7
	F	23	5:36 3.7	11:32 1.4	17:00 4.2	23:50 0.6
	S	24	6:28 3.8	12:22 1.3	17:54 4.4	. . . . .
A	S	25	0:38 0.5	7:04 4.1	13:04 1.2	18:40 4.6
	M	26	1:14 0.4	7:32 4.3	13:40 1.1	19:20 4.7
○	Tu	27	1:47 0.3	8:00 4.5	14:08 1.0	19:57 4.8
	W	28	2:20 0.3	8:28 4.7	14:35 0.9	20:31 4.9
E	Th	29	2:50 0.3	8:55 4.9	15:05 0.7	21:05 4.9
	F	30	3:20 0.4	9:28 5.1	15:38 0.6	21:40 4.9
	S	31	3:48 0.5	10:02 5.2	16:12 0.5	22:14 4.8

SEPTEMBER.

Moon.	Day of— W.	M.	Time and Height of High and Low Water.			
	S	1	4:17 0.6	10:38 5.1	16:52 0.6	22:52 4.7
	M	2	4:50 0.8	11:17 5.0	17:40 0.6	23:35 4.5
	Tu	3	5:28 1.1	12:00 4.9	18:35 0.7	. . . . .
☾	W	4	0:25 4.3	6:18 1.3	12:51 4.7	19:41 0.8
N	Th	5	1:26 4.1	7:27 1.5	13:52 4.5	20:52 0.8
	F	6	2:40 4.0	8:56 1.6	15:02 4.5	22:00 0.7
	S	7	4:04 4.0	10:19 1.4	16:18 4.6	23:03 0.4
	S	8	5:16 4.4	11:30 1.0	17:26 4.9	. . . . .
P	M	9	0:00 0.1	6:16 4.8	12:28 0.6	18:26 5.2
●	Tu	10	0:52 −0.2	7:07 5.2	13:18 0.2	19:20 5.5
E	W	11	1:40 −0.4	7:54 5.6	14:07 0.0	20:10 5.6
	Th	12	2:28 −0.4	8:38 5.8	14:54 −0.2	20:57 5.6
	F	13	3:14 −0.3	9:21 5.8	15:42 −0.2	21:42 5.5
	S	14	4:00 −0.1	10:04 5.7	16:31 −0.1	22:26 5.2
	S	15	4:47 0.3	10:48 5.4	17:22 0.2	23:13 4.8
	M	16	5:39 0.8	11:30 5.1	18:17 0.4	. . . . .
	Tu	17	0:03 4.4	6:36 1.2	12:18 4.7	19:19 0.7
☽ S	W	18	1:01 4.0	7:45 1.5	13:11 4.3	20:22 0.7
	Th	19	2:14 3.6	9:00 1.6	14:13 4.1	21:27 0.9
	F	20	3:40 3.5	10:11 1.6	15:22 4.0	22:25 0.9
A	S	21	4:53 3.6	11:08 1.5	16:30 4.0	23:15 0.8
	S	22	5:42 3.9	11:54 1.3	17:26 4.2	. . . . .
	M	23	0:00 0.6	6:18 4.2	12:31 1.1	18:13 4.5
	Tu	24	0:38 0.5	6:50 4.5	13:04 0.8	18:53 4.7
	W	25	1:11 0.4	7:20 4.8	13:32 0.6	19:30 4.8
E ○	Th	26	1:42 0.3	7:50 5.1	14:04 0.4	20:05 5.0
	F	27	2:12 0.3	8:22 5.3	14:36 0.2	20:40 5.1
	S	28	2:43 0.4	8:56 5.4	15:10 0.1	21:16 5.0
	S	29	3:14 0.5	9:31 5.3	15:48 0.1	21:51 5.0
	M	30	3:45 0.7	10:08 5.2	16:31 0.2	22:33 4.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	4:21 0.9	10:50 5.0	17:20 0.4	23:19 4.5
	W	2	5:05 1.2	11:35 4.8	18:16 0.7	. . . . .
N ☾	Th	3	0:12 4.3	6:02 1.5	12:29 4.5	19:25 0.8
	F	4	1:17 4.1	7:30 1.7	13:32 4.3	20:38 0.9
	S	5	2:35 4.0	9:06 1.6	14:48 4.2	21:48 0.7
	S	6	3:55 4.1	10:26 1.3	16:06 4.4	22:49 0.5
P	M	7	5:01 4.5	11:25 0.9	17:15 4.7	23:43 0.2
	Tu	8	5:56 4.9	12:16 0.5	18:14 5.0	. . . . .
E	W	9	0:32 0.0	6:44 5.3	13:02 0.1	19:05 5.2
●	Th	10	1:20 —0.1	7:28 5.6	13:47 —0.2	19:52 5.4
	F	11	2:08 —0.1	8:10 5.7	14:32 —0.3	20:37 5.4
	S	12	2:46 0.1	8:52 5.7	15:16 —0.3	21:19 5.2
	S	13	3:30 0.3	9:32 5.5	16:01 —0.1	22:03 5.0
	M	14	4:15 0.7	10:13 5.3	16:50 0.1	22:47 4.6
	Tu	15	5:03 1.1	10:55 4.9	17:42 0.4	23:35 4.3
S	W	16	6:00 1.5	11:40 4.5	18:40 0.7	. . . . .
☽	Th	17	0:29 4.0	7:11 1.7	12:30 4.2	19:42 0.9
	F	18	1:33 3.7	8:29 1.8	13:28 3.9	20:43 1.0
A	S	19	2:44 3.7	9:37 1.7	14:36 3.8	21:40 1.0
	S	20	3:48 3.8	10:30 1.5	15:45 3.9	22:31 0.9
	M	21	4:40 4.1	11:14 1.3	16:45 4.1	23:14 0.7
	Tu	22	5:22 4.4	11:50 1.0	17:35 4.3	23:52 0.6
E	W	23	6:00 4.7	12:21 0.6	18:19 4.6	. . . . .
	Th	24	0:28 0.5	6:36 5.0	12:56 0.3	18:59 4.8
○	F	25	1:02 0.4	7:12 5.3	13:31 0.0	19:38 5.0
	S	26	1:36 0.4	7:49 5.5	14:09 —0.1	20:16 5.1
	S	27	2:10 0.5	8:25 5.5	14:49 —0.2	20:54 5.1
	M	28	2:45 0.6	9:05 5.5	15:32 —0.2	21:36 5.0
	Tu	29	3:25 0.8	9:47 5.3	16:17 0.0	22:21 4.8
N	W	30	4:08 1.0	10:30 5.0	17:06 0.3	23:12 4.6
	Th	31	5:02 1.3	11:19 4.7	18:08 0.5	. . . . .

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	0:06 4.4	6:16 1.6	12:15 4.5	19:15 0.7
	S	2	1:14 4.2	7:50 1.6	13:22 4.2	20:25 0.8
P	S	3	2:28 4.2	9:14 1.4	14:38 4.1	21:31 0.7
	M	4	3:38 4.4	10:20 1.1	15:56 4.2	22:30 0.5
E	Tu	5	4:38 4.6	11:15 0.7	17:08 4.4	23:23 0.4
	W	6	5:30 5.0	12:00 0.4	18:00 4.7	. . . . .
	Th	7	0:13 0.3	6:18 5.2	12:46 0.1	18:40 4.9
●	F	8	1:00 0.3	7:02 5.4	13:30 —0.2	19:36 5.0
	S	9	1:43 0.4	7:43 5.5	14:12 —0.3	20:18 4.9
	S	10	2:24 0.6	8:24 5.5	14:55 —0.2	21:00 4.8
	M	11	3:05 0.8	9:05 5.3	15:39 —0.1	21:43 4.7
S	Tu	12	3:48 1.1	9:43 5.1	16:24 0.1	22:25 4.4
	W	13	4:35 1.4	10:25 4.8	17:12 0.4	23:10 4.2
	Th	14	5:26 1.6	11:07 4.5	18:02 0.7	23:58 4.1
	F	15	6:30 1.8	11:52 4.2	18:57 0.9	. . . . .
A ☽	S	16	0:50 3.9	7:38 1.8	12:43 4.0	19:52 1.0
	S	17	1:47 3.9	8:42 1.7	13:43 3.8	20:45 1.0
	M	18	2:43 4.1	9:35 1.5	14:47 3.8	21:34 1.0
E	Tu	19	3:35 4.3	10:18 1.2	15:50 4.0	22:19 0.9
	W	20	4:23 4.6	10:59 0.9	16:46 4.2	23:00 0.8
	Th	21	5:08 4.8	11:40 0.5	17:37 4.4	23:45 0.7
	F	22	5:52 5.1	12:20 0.1	18:25 4.6	. . . . .
	S	23	0:24 0.6	6:36 5.4	13:02 —0.2	19:10 4.9
○	S	24	1:05 0.6	7:18 5.6	13:45 —0.4	19:52 5.0
	M	25	1:46 0.6	8:02 5.6	14:30 —0.4	20:37 5.0
N	Tu	26	2:28 0.7	8:45 5.6	15:17 —0.4	21:25 5.0
	W	27	3:16 0.8	9:36 5.4	16:07 —0.2	22:13 4.9
P	Th	28	4:10 1.0	10:20 5.2	17:00 0.0	23:06 4.8
	F	29	5:13 1.2	11:11 4.9	18:08 0.3	. . . . .
	S	30	0:02 4.6	6:28 1.3	12:08 4.6	19:01 0.5

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	1:08 4.5	7:47 1.3	13:12 4.8	20:05 0.6
E	M	2	2:08 4.5	8:58 1.1	14:22 4.1	21:08 0.6
	Tu	3	3:13 4.6	10:12 0.9	15:40 4.1	22:10 0.6
	W	4	4:10 4.7	10:57 0.6	16:50 4.2	23:05 0.7
	Th	5	5:05 4.9	11:45 0.4	17:50 4.3	23:57 0.7
	F	6	5:55 5.0	12:32 0.2	18:43 4.4	. . . . .
	S	7	0:47 0.7	6:40 5.2	13:12 0.0	19:30 4.4
●	S	8	1:32 0.8	7:24 5.2	13:59 —0.1	20:12 4.4
S	M	9	2:15 0.9	8:05 5.2	14:41 —0.1	20:52 4.4
	Tu	10	2:55 1.1	8:45 5.1	15:23 0.0	21:30 4.4
	W	11	3:36 1.3	9:25 4.9	16:05 0.1	22:10 4.4
	Th	12	4:16 1.5	10:02 4.7	16:47 0.4	22:48 4.3
	F	13	5:00 1.6	10:42 4.5	17:30 0.6	23:28 4.3
A	S	14	5:47 1.7	11:22 4.3	18:13 0.8	. . . . .
	S	15	0:10 4.3	6:38 1.7	12:06 4.1	18:57 1.0
☽	M	16	0:57 4.3	7:34 1.6	12:56 4.0	19:44 1.1
E	Tu	17	1:47 4.4	8:27 1.4	13:52 4.0	20:30 1.1
	W	18	2:37 4.5	9:20 1.2	14:51 4.0	21:18 1.1
	Th	19	3:28 4.7	10:10 0.8	15:54 4.1	22:07 1.1
	F	20	4:20 4.9	11:00 0.5	16:55 4.2	23:00 1.0
	S	21	5:12 5.1	11:50 0.1	17:58 4.5	23:50 0.8
	S	22	6:04 5.3	12:38 —0.2	18:45 4.7	. . . . .
N	M	23	0:41 0.7	6:55 5.5	13:27 —0.4	19:37 4.9
O	Tu	24	1:32 0.7	7:45 5.6	14:17 —0.5	20:26 5.0
P	W	25	2:23 0.7	8:33 5.7	15:06 —0.6	21:16 5.1
	Th	26	3:16 0.7	9:23 5.6	15:57 —0.5	22:05 5.1
	F	27	4:13 0.8	10:12 5.4	16:50 —0.3	22:57 5.1
	S	28	5:15 0.6	11:05 5.1	17:45 0.0	23:50 5.0
	S	29	6:20 0.9	11:58 4.8	18:42 0.2	. . . . .
E ☾	M	30	0:44 4.9	7:27 0.9	12:57 4.5	19:42 0.5
	Tu	31	1:42 4.8	8:31 0.9	14:02 4.2	20:42 0.7

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The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:09 2.4	8:22 22.7	14:45 1.0	20:54 21.8
	Tu	2	3:06 1.9	9:19 23.5	15:42 0.0	21:52 22.4
N	W	3	4:03 1.3	10:13 24.2	16:37 —0.7	22:47 22.09
O P	Th	4	4:57 0.8	11:08 24.7	17:30 —1.3	23:41 23.04
	F	5	5:50 0.4	12:00 25.0	18:23 —1.6	. .
	S	6	0:33 23.6	6:42 0.2	12:53 25.0	19:14 —1.6
	S	7	1:25 23.7	7:35 0.1	13:46 24.7	20:06 —1.2
	M	8	2:18 23.6	8:28 0.4	14:40 24.1	20:59 —0.6
E	Tu	9	3:12 23.6	9:23 0.8	15:35 23.3	21:52 0.2
	W	10	4:06 22.8	10:20 1.3	16:32 22.4	22:48 1.2
☾	Th	11	5:02 22.3	11:20 1.8	17:31 21.5	23:41 2.1
	F	12	5:59 21.8	12:20 2.4	18:32 20.7	. . . . .
	S	13	0:45 2.8	6:58 21.4	13:20 2.7	19:35 20.1
	S	14	1:45 3.3	7:55 21.2	14:20 2.8	20:34 19.9
	M	15	2:42 3.5	8:49 21.2	15:15 2.7	21:30 19.7
	Tu	16	3:35 3.6	9:40 21.2	16:05 2.5	22:18 19.8
S A	W	17	4:23 3.6	10:26 21.2	16:49 2.4	23:02 19.9
	Th	18	5:05 3.6	11:08 21.3	17:30 2.2	23:40 20.0
●	F	19	5:43 3.6	11:47 21.3	18:06 2.1	. . . . .
	S	20	0:14 20.2	6:18 3.6	12:22 21.3	18:40 2.0
	S	21	0:47 20.5	6:51 3.4	12:57 21.4	19:15 1.9
	M	22	1:20 19.9	7:26 3.2	13:32 21.5	19:50 1.8
	Tu	23	1:56 21.2	8:03 2.9	14:10 21.6	20:27 1.8
E	W	24	2:35 21.6	8:44 2.6	14:50 21.6	21:08 1.9
	Th	25	3:18 21.8	9:29 2.4	15:37 21.4	21:52 2.2
	F	26	4:08 21.7	10:20 2.4	16:27 21.2	22:42 2.6
☽	S	27	4:55 21.6	11:15 2.4	17:22 20.9	23:37 3.0
	S	28	5:51 21.6	12:15 2.4	18:22 20.7	. . . . .
	M	29	0:37 3.2	6:52 21.8	13:17 2.1	19:27 20.7
	Tu	30	1:41 3.1	7:55 22.1	14:22 1.5	20:31 21.0
N	W	31	2:45 2.6	8:58 22.9	15:23 0.7	21:33 21.7

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	3:46 1.8	9:58 23.7	16:21 —0.3	22:32 22.6
O	F	2	4:43 0.9	10:54 24.5	17:16 —1.0	23:28 23.4
	S	3	5:37 0.1	11:47 25.0	18:09 —1.6	. . . . .
	S	4	0:19 24.0	6:30 —0.5	12:40 25.2	19:00 —1.7
	M	5	1:09 24.3	7:20 —0.7	13:30 25.0	19:47 —1.5
E	Tu	6	1:58 24.3	8:09 —0.5	14:20 24.5	20:36 —0.8
	W	7	2:46 24.0	9:00 —0.1	15:10 23.6	21:24 0.2
	Th	8	3:36 23.3	9:52 0.7	16:02 22.4	22:16 1.4
☾	F	9	4:28 22.4	10:48 1.7	16:58 21.1	23:11 2.6
	S	10	5:23 21.5	11:44 2.7	17:58 20.0	. . . . .
	S	11	0:09 3.6	6:21 20.8	12:45 3.4	19:00 19.2
	M	12	1:10 4.3	7:21 20.2	13:46 3.7	20:03 18.9
S	Tu	13	2:11 4.6	8:19 20.2	14:44 3.6	21:00 18.9
A	W	14	3:07 4.5	9:13 20.3	15:37 3.3	21:50 19.2
	Th	15	3:56 4.2	10:00 20.6	16:23 2.8	22:34 19.7
	F	16	4:40 3.8	10:44 21.0	17:02 2.4	23:13 20.2
	S	17	5:17 3.4	11:22 21.4	17:40 1.9	23:45 20.8
●	S	18	5:51 2.9	11:56 21.8	18:12 1.6	. . . . .
	M	19	0:18 21.4	6:26 2.4	12:30 22.1	18:47 1.3
E	Tu	20	0:51 22.0	7:00 1.9	13:05 22.4	19:20 1.1
	W	21	1:26 22.4	7:37 1.5	13:44 22.5	19:58 1.1
	Th	22	2:05 22.7	8:17 1.3	14:24 22.5	20:38 1.4
	F	23	2:44 22.6	9:01 1.4	15:07 22.2	21:20 1.9
	S	24	3:31 22.3	9:51 1.7	15:57 21.5	22:10 2.6
☽	S	25	4:22 21.9	10:46 2.1	16:54 20.8	23:08 3.3
	M	26	5:22 21.4	11:48 2.4	17:58 20.2	. . . . .
N	Tu	27	0:11 3.8	6:27 21.2	12:54 2.5	19:06 20.1
	W	28	1:21 3.7	7:36 21.5	14:03 2.1	20:16 20.5
	Th	29	2:30 3.1	8:42 22.3	15:06 1.2	21:22 21.4

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	3:34 1.9	9:46 23.8	16:08 0.1	22:20 22.6
	S	2	4:31 0.7	10:40 24.2	17:02 —0.8	23:12 23.7
○	S	3	5:23 —0.3	11:34 24.9	17:51 —1.4	. . . . .
E	M	4	0:00 24.4	6:12 —1.0	12:22 25.2	18:38 —1.5
	Tu	5	0:48 24.8	7:00 —1.2	13:10 25.0	19:23 —1.2
	W	6	1:32 24.7	7:46 —1.0	13:56 24.8	20:08 —0.4
	Th	7	2:18 24.2	8:33 —0.3	14:42 23.2	20:55 0.6
	F	8	3:08 23.3	9:20 0.7	15:32 21.9	21:42 2.0
	S	9	3:54 22.1	10:12 1.9	16:23 20.5	22:34 3.3
☾	S	10	4:45 21.0	11:07 3.0	17:20 19.4	23:30 4.4
S	M	11	5:42 20.0	12:06 3.9	18:22 18.5	. . . . .
	Tu	12	0:32 5.1	6:44 19.5	13:08 4.3	19:25 18.3
A	W	13	1:34 5.3	7:44 19.4	14:07 4.2	20:24 18.5
	Th	14	2:32 5.0	8:40 19.7	15:01 3.7	21:16 19.1
	F	15	3:24 4.4	9:29 20.3	15:47 3.0	21:58 19.9
	S	16	4:06 3.6	10:11 20.9	16:28 2.4	22:36 20.8
	S	17	4:46 2.8	10:50 21.6	17:06 1.7	23:11 21.7
●	M	18	5:21 2.0	11:26 22.3	17:40 1.2	23:46 22.4
E	Tu	19	5:57 1.3	12:02 22.8	18:16 0.8	. . . . .
	W	20	0:20 23.1	6:34 0.7	12:40 23.3	18:51 0.7
	Th	21	0:56 23.4	7:11 0.4	13:19 23.2	19:30 0.8
	F	22	1:36 23.4	7:52 0.3	14:00 23.0	20:10 1.3
	S	23	2:18 23.1	8:38 0.7	14:45 22.3	20:55 2.0
	S	24	3:06 22.5	9:28 1.3	15:36 21.5	21:47 2.8
N ☽	M	25	4:00 21.8	10:26 2.0	16:35 20.6	22:47 3.7
	Tu	26	5:02 21.2	11:30 2.6	17:41 19.9	23:56 4.1
	W	27	6:11 20.9	12:38 2.8	18:54 19.8	. . . . .
P	Th	28	1:08 3.9	7:22 21.1	13:48 2.4	20:05 20.5
	F	29	2:19 3.0	8:31 21.9	14:54 1.5	21:08 21.6
	S	30	3:21 1.7	9:32 22.9	15:51 0.5	22:04 22.9
	S	31	4:16 0.4	10:29 23.9	16:44 —0.4	22:52 23.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 11.9 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	5:06	11:16	17:31	23:38
			—0.6	24.5	—0.8	24.6
	Tu	2	5:52	12:03	18:15	. . .
			—1.1	24.6	—0.8	. . .
	W	3	0:22	6:38	12:48	18:59
			24.7	—1.2	24.2	—0.4
	Th	4	1:06	7:21	13:31	19:40
			24.4	—0.8	23.5	0.5
	F	5	1:48	8:05	14:14	20:24
			23.7	0.0	22.4	1.6
	S	6	2:32	8:51	15:00	21:08
			22.7	1.1	21.2	2.8
	S	7	3:18	9:39	15:48	21:58
			21.6	2.2	20.0	4.0
S	M	8	4:07	10:30	16:42	22:52
			20.4	3.3	19.0	5.0
☾ A	Tu	9	5:02	11:27	17:40	23:50
			19.5	4.1	18.4	5.6
	W	10	6:01	12:25	18:41	. . .
			19.0	4.5	18.3	. . .
	Th	11	0:52	7:01	18:24	19:38
			5.6	18.9	4.4	18.6
	F	12	1:50	7:57	14:17	20:30
			5.2	19.4	3.8	19.4
	S	13	2:41	8:48	15:05	21:14
			4.3	20.1	3.1	20.4
	S	14	3:27	9:34	15:48	21:55
			3.3	21.0	2.3	21.5
E	M	15	4:08	10:14	16:28	22:34
			2.2	21.9	1.6	22.5
	Tu	16	4:48	10:54	17:06	23:12
			1.1	22.7	1.0	23.3
●	W	17	5:27	11:34	17:44	23:50
			0.3	23.3	0.6	23.8
	Th	18	6:06	12:14	18:24	. . .
			—0.3	23.6	0.6	. . .
	F	19	0:30	6:48	12:55	19:04
			24.1	—0.5	23.5	0.8
	S	20	1:12	7:33	13:40	19:48
			24.0	—0.4	23.1	1.3
	S	21	1:58	8:21	14:28	20:37
			23.5	0.1	22.3	2.1
N P	M	22	2:48	9:14	15:21	21:32
			22.7	0.9	21.5	3.0
	Tu	23	3:45	10:12	16:24	22:35
			21.9	1.7	20.6	3.7
☽	W	24	4:50	11:16	17:31	23:45
			21.2	2.4	20.1	3.9
	Th	25	6:00	12:24	18:41	. . .
			20.9	2.6	20.2	. . .
	F	26	0:57	7:10	13:32	19:49
			3.5	21.1	2.3	21.4
	S	27	2:04	8:16	14:36	20:49
			2.6	21.8	1.6	22.0
E	S	28	3:05	9:16	15:32	21:43
			1.5	22.6	0.9	23.0
	M	29	3:58	10:10	16:32	22:30
			0.4	23.2	0.3	23.8
	Tu	30	4:48	10:59	17:08	23:15
			—0.4	23.5	0.1	24.1

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	5:33	11:44	17:51	23:58
			—0.7	23.4	0.3	24.1
	Th	2	6:15	12:26	18:34	. . .
			—0.5	22.9	0.9	. . .
	F	3	0:40	6:56	13:08	19:15
			23.7	—0.1	22.3	1.7
	S	4	1:21	7:40	13:50	19:56
			23.0	0.7	21.4	2.6
S	S	5	2:08	8:24	14:32	20:38
			22.1	1.6	20.5	3.6
	M	6	2:45	9:08	15:18	21:25
			21.1	2.5	19.7	4.4
A	Tu	7	3:32	9:55	16:07	22:14
			20.2	3.3	19.1	5.1
	W	8	4:21	10:46	16:58	23:08
			19.4	4.0	18.7	5.4
☾	Th	9	5:16	11:40	17:58	. . .
			19.0	4.3	18.8	. . .
	F	10	0:06	6:13	12:34	18:48
			5.4	19.0	4.2	19.2
	S	11	1:01	7:09	13:26	19:39
			4.8	19.4	3.8	20.0
E	S	12	1:54	8:02	14:16	20:27
			4.0	20.1	3.1	21.0
	M	13	2:44	8:50	15:04	21:13
			2.9	21.0	2.3	22.0
	Tu	14	3:30	9:38	15:48	21:57
			1.7	22.0	1.6	22.9
	W	15	4:14	10:22	16:31	22:40
			0.6	22.7	1.1	23.7
●	Th	16	4:59	11:06	17:15	23:24
			—0.2	23.2	0.7	24.3
	F	17	5:44	11:50	18:00	. . .
			—0.7	23.5	0.6	. . .
	S	18	0:06	6:30	12:37	18:45
			24.5	—1.0	23.4	0.8
N P	S	19	0:54	7:17	13:25	19:32
			24.3	—0.9	23.0	1.3
	M	20	1:44	8:06	14:16	20:25
			23.8	—0.3	22.4	1.9
	Tu	21	2:36	9:02	15:12	21:22
			23.1	0.4	21.3	2.5
	W	22	3:34	10:00	16:13	22:05
			22.3	1.2	21.2	3.0
☽	Th	23	4:37	11:02	17:17	23:32
			21.6	1.8	20.9	3.1
	F	24	5:45	12:07	18:23	. . .
			21.2	2.2	21.0	. . .
E	S	25	0:40	6:52	13:12	19:25
			2.8	21.2	2.2	21.5
	S	26	1:45	7:56	14:13	20:24
			2.2	21.5	1.9	22.2
	M	27	2:45	8:55	15:06	21:17
			1.5	21.8	1.6	22.8
	Tu	28	3:41	9:50	16:00	22:07
			0.9	22.1	1.4	23.2
	W	29	4:28	10:40	16:47	22:53
			0.4	22.1	1.4	23.3
○	Th	30	5:13	11:25	17:30	23:36
			0.3	21.9	1.6	23.1
	F	31	5:57	12:06	18:12	. . .
			0.5	21.6	2.1	. . .

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	0:18	6:38	12:48	18:52
			22.7	0.9	21.1	2.7
	S	2	0:58	7:18	13:27	19:31
			22.2	1.4	20.6	3.3
	M	3	1:37	7:57	14:06	20.10
			21.5	2.0	20.2	3.9
A	Tu	4	2:17	8:40	14:47	20:52
			20.8	2.5	19.2	4.4
	W	5	2:59	9:20	15:30	21:37
			20.2	3.1	19.3	4.7
	Th	6	3:44	10:05	16:17	22:27
			19.8	3.5	19.5	4.8
☾	F	7	4:32	10:53	17:05	23:18
			19.5	3.7	19.7	4.6
	S	8	5:25	11:45	17:57	. . .
			19.5	3.7	20.1	. . .
E	S	9	0:12	6:18	12:37	18:48
			4.2	19.8	3.5	20.6
	M	10	1:06	7:13	13:30	19:40
			3.5	20.3	3.1	21.3
	Tu	11	2:00	8:07	14:20	20:30
			2.5	21.0	2.5	22.2
	W	12	2:52	9:00	15:11	21:20
			1.5	21.7	2.0	23.1
	Th	13	3:44	9:50	16:01	22:10
			0.5	22.3	1.5	23.8
	F	14	4:33	10:41	16:50	23:01
			—0.3	22.9	1.0	24.4
● N	S	15	5:23	11:31	17:40	23:50
			—0.9	23.2	0.7	24.7
P	S	16	6:12	12:22	18:30	. . .
			—1.2	23.4	0.7	. . .
	M	17	0:40	7:08	13:18	19:21
			24.6	—1.2	23.2	0.8
	Tu	18	1:32	7:55	14:06	20:15
			24.3	—0.9	23.0	1.1
	W	19	2:27	8:48	15:00	21:10
			23.8	—0.3	22.6	1.5
	Th	20	3:22	9:45	15:58	22:10
			23.1	0.4	22.2	1.9
☽ E	F	21	4:22	10:42	16:57	23:12
			22.3	1.1	22.0	2.1
	S	22	5:25	11:43	17:57	. . .
			21.7	1.7	21.8	. . .
	S	23	0:26	6:28	12:45	18:57
			2.2	21.3	2.2	21.8
	M	24	1:20	7:32	13:46	19:57
			2.2	21.0	2.5	21.9
	Tu	25	2:20	8:32	14:44	20:52
			2.0	20.9	2.5	22.1
	W	26	3:15	9:30	15:37	21:43
			1.7	20.9	2.5	22.2
	Th	27	4:07	10:21	16:27	22:32
			1.5	20.8	2.6	22.3
	F	28	4:55	11:08	17:12	23:17
			1.4	20.8	2.7	22.2
S ○	S	29	5:39	11:50	17:54	23:58
			1.4	20.6	3.0	22.0
	S	30	6:18	12:30	18:32	. . .
			1.6	20.5	3.3	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 11.9 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart unless a minus (—) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	0:36	6:56	13:05	19:08
			21.6	1.8	20.3	3.6
	Tu	2	1:13	7:32	13:40	19:45
			21.3	2.0	20.3	3.8
	W	3	1:50	8:08	14:17	20:22
			21.0	2.3	20.3	3.8
	Th	4	2:27	8:47	14:55	21:02
			20.7	2.5	20.4	3.8
	F	5	3:08	9:27	15:37	21:46
			20.5	2.7	20.6	3.7
E	S	6	3:52	10:10	16:22	22:33
			20.4	3.0	20.8	3.5
☾	S	7	4:40	10:58	17:10	23:27
			20.3	3.1	20.9	3.3
	M	8	5:32	11:50	18:02	. . .
			20.4	3.2	21.1	. . .
	Tu	9	0:22	6:28	12:43	18:58
			3.0	20.5	3.2	21.5
	W	10	1:22	7:27	13:41	19:55
			2.4	20.7	3.0	22.1
	Th	11	2:20	8:26	14:40	20:52
			1.7	21.2	2.5	22.8
	F	12	3:17	9:25	15:37	21:48
			0.8	21.8	2.0	23.6
N	S	13	4:12	10:21	16:31	22:42
			—0.1	22.4	1.3	24.3
● P	S	14	5:05	11:15	17:25	23:35
			—0.8	23.1	0.7	24.8
	M	15	5:57	12:08	18:17	. . .
			—1.3	23.5	0.2	. . .
	Tu	16	0:27	6:18	13:00	19:08
			25.0	—1.6	23.8	0.0
	W	17	1:20	7:40	13:50	20:00
			24.9	—1.5	23.9	0.0
	Th	18	2:12	8:30	14:43	20:54
			24.5	—1.0	23.7	0.3
E	F	19	3:05	9:23	15:35	21:48
			23.8	—0.3	23.3	0.7
	S	20	4:00	10:17	16:30	22:47
			23.0	0.7	22.8	1.3
☽	S	21	4:59	11:14	17:27	23:48
			22.0	1.2	22.2	2.0
	M	22	6:00	12:14	18:26	. . .
			21.0	2.6	21.6	. . .
	Tu	23	0:50	7:04	13:16	19:27
			2.5	20.3	3.2	21.3
	W	24	1:52	8:07	14:17	20:25
			2.7	19.9	3.5	21.2
	Th	25	2:51	9:08	15:15	21:21
			2.7	19.8	3.5	21.3
S	F	26	3:47	10:02	16:07	22:10
			2.5	19.9	3.4	21.4
	S	27	4:35	10:50	16:58	22:58
			2.2	20.1	3.3	21.5
	S	28	5:18	11:30	17:34	23:38
			2.0	20.2	3.3	21.5
○ A	M	29	5:57	12:07	18:10	. . .
			1.9	20.4	3.2	. . .
	Tu	30	0:14	6:33	12:40	18:45
			21.5	1.9	20.6	3.2
	W	31	0:48	7:05	13:11	19:17
			21.4	1.9	20.9	3.1

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	1:22	7:38	13:45	19:52
			21.5	1.9	21.2	2.9
E	F	2	1:57	8:14	14:20	20:28
			21.4	2.0	21.5	2.7
	S	3	2:35	8:50	14:58	21:10
			21.4	2.0	21.7	2.5
	S	4	3:17	9:31	15:42	21:55
			21.4	2.3	21.7	2.5
	M	5	4:08	10:16	16:28	22:47
			21.1	2.7	21.5	2.6
☾	Tu	6	4:54	11:08	17:22	23:45
			20.7	3.1	21.4	2.7
	W	7	5:52	12:05	18:22	. . .
			20.4	3.5	21.4	. . .
	Th	8	0:47	6:55	13:10	19:25
			2.5	20.3	3.5	21.7
N	F	9	1:51	8:00	14:15	20:08
			2.0	20.6	3.1	22.3
	S	10	2:58	9:05	15:18	21:30
			1.3	21.3	2.3	23.2
	S	11	3:54	10:04	16:15	22:27
			0.3	22.2	1.3	24.1
P ●	M	12	4:50	11:00	17:10	23:20
			—0.7	23.2	0.3	24.9
	Tu	13	5:42	11:57	18:02	. . .
			—1.4	24.0	—0.5	. . .
	W	14	0:13	6:32	12:42	18:53
			25.3	—1.8	24.5	—1.0
E	Th	15	1:03	7:20	13:30	19:42
			25.3	—1.8	24.7	—1.0
	F	16	1:53	8:08	14:19	20:32
			25.0	—1.3	24.5	—0.8
	S	17	2:43	8:57	15:08	21:24
			24.2	—0.4	24.0	0.0
	S	18	3:35	9:48	16:00	22:17
			23.0	0.8	23.1	1.0
☽	M	19	4:30	10:43	16:55	23:16
			21.7	2.1	22.0	2.1
	Tu	20	5:30	11:41	17:54	. . .
			20.5	3.2	21.1	. . .
	W	21	0:18	6:33	12:45	18:55
			3.0	19.5	4.1	20.5
S	Th	22	1:22	7:40	13:48	19:58
			3.5	19.0	4.4	20.3
	F	23	2:27	8:42	14:50	20:57
			3.5	19.0	4.3	20.4
	S	24	3:21	9:37	15:44	21:48
			3.2	19.4	4.0	20.7
A	S	25	4:10	10:24	16:30	22:33
			2.8	19.9	3.5	21.0
	M	26	4:52	11:02	17:10	23:12
			2.3	20.3	3.2	21.4
○	Tu	27	5:30	11:37	17:43	23:48
			2.0	20.8	2.8	21.6
	W	28	6:02	12:08	18:16	. . .
			1.7	21.3	2.5	. . .
E	Th	29	0:20	6:34	12:39	18:48
			21.8	1.6	21.8	2.1
	F	30	0:54	7:07	13:11	19:23
			22.1	1.5	22.2	1.8
	S	31	1:28	7:40	13:46	19:58
			22.2	1.5	22.5	1.5

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	2:05	8:15	14:24	20:38
			22.2	1.7	22.4	1.5
	M	2	2:45	8:56	15:07	21:25
			22.0	2.0	22.2	1.7
	Tu	3	3:32	9:43	15:55	22:17
			21.5	2.6	21.8	2.1
☾	W	4	4:24	10:35	16:50	23:15
			20.8	3.3	21.3	2.5
N	Th	5	5:24	11:37	17:58	. . .
			20.2	3.8	21.0	. . .
	F	6	0:20	6:32	12:46	19:01
			2.7	20.0	4.0	21.2
	S	7	1:29	7:41	13:56	20:10
			2.4	20.2	3.5	21.8
	S	8	2:35	8:47	15:02	21:18
			1.7	21.1	2.4	22.8
P	M	9	3:37	9:50	16:02	22:12
			0.6	22.3	1.0	23.9
●	Tu	10	4:33	10:43	16:57	23:06
			—0.5	23.5	—0.2	24.8
E	W	11	5:28	11:32	17:45	23:57
			—1.2	24.5	—1.1	25.3
	Th	12	6:12	12:20	18:34	. . .
			—1.6	25.1	—1.5	. . .
	F	13	0:45	6:57	13:07	19:20
			25.3	—1.5	25.2	—1.5
	S	14	1:32	7:44	13:52	20:07
			24.8	—0.9	24.8	—1.0
	S	15	2:20	8:30	14:40	20:57
			23.9	0.1	23.9	0.0
	M	16	3:08	9:18	15:30	21:48
			22.6	1.3	22.8	1.1
	Tu	17	4:00	10:12	16:23	22:44
			21.2	2.7	21.5	2.4
☽	W	18	4:58	11:08	17:20	23:45
S			20.0	3.9	20.5	3.4
	Th	19	6:00	12:12	18:23	. . .
			19.0	4.8	19.8	. . .
	F	20	0:48	7:07	13:18	19:25
			4.0	18.6	5.1	19.5
A	S	21	1:50	8:08	14:18	20:25
			4.0	18.7	4.8	19.7
	S	22	2:48	9:02	15:12	21:17
			3.7	19.3	4.2	20.2
	M	23	3:36	9:48	15:57	22:02
			3.1	20.0	3.6	20.8
	Tu	24	4:18	10:26	16:37	22:40
			2.5	20.7	2.9	21.3
	W	25	4:55	11:00	17:10	23:15
			2.0	21.4	2.2	21.8
E ○	Th	26	5:28	11:32	17:44	23:49
			1.6	22.1	1.6	22.3
	F	27	6:00	12:05	18:18	. . .
			1.3	22.6	1.1	. . .
	S	28	0:28	6:35	12:40	18:53
			22.6	1.2	23.0	0.8
	S	29	1:00	7:10	13:15	19:32
			22.8	1.3	23.1	0.6
	M	30	1:39	7:47	13:55	20:14
			22.6	1.5	23.0	0.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 11.9 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminishd by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.: ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator: A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	2:20	8:30	14:40	21:01
			22.3	2.1	22.6	1.2
	W	2	3:08	9:18	15:30	21:54
			21.6	2.8	21.9	1.8
N	Th	3	4:04	10:14	16:30	22:56
☾			20.8	3.5	21.3	2.4
	F	4	5:06	11:19	17:34	. . .
			20.1	4.1	20.8	. . .
	S	5	0:02	6:16	12:30	18:45
			2.8	19.9	4.1	20.9
	S	6	1:11	7:26	13:42	19:54
			2.6	20.3	3.3	21.5
P	M	7	2:18	8:32	14:48	20:59
			1.9	21.4	2.1	22.5
	Tu	8	3:20	9:30	15:46	21:56
			0.9	22.7	0.7	23.6
E	W	9	4:13	10:23	16:38	22:48
			—0.1	23.9	—0.5	24.4
●	Th	10	5:02	11:12	17:26	23:38
			—0.7	24.7	—1.2	24.7
	F	11	5:49	11:57	18:18	. . .
			—0.9	25.0	—1.5	. . .
	S	12	0:28	6:34	12:42	19:00
			24.5	—0.7	24.9	—1.3
	S	13	1:10	7:19	13:26	19:44
			23.9	0.0	24.4	—0.7
	M	14	1:54	8:04	14:12	20:32
			23.0	1.0	23.4	0.3
	Tu	15	2:42	8:50	15:00	21:20
			21.8	2.2	22.3	1.5
S	W	16	3:32	9:41	15:50	22:13
			20.7	3.4	21.1	2.7
☽	Th	17	4:26	10:36	16:46	23:10
			19.6	4.5	20.0	3.6
	F	18	5:25	11:36	17:46	. . .
			18.9	5.1	19.4	. . .
A	S	19	0:09	6:27	12:38	18:47
			4.2	18.6	5.3	19.1
	S	20	1:08	7:25	13:38	19:44
			4.2	18.8	5.0	19.3
	M	21	2:03	8:18	14:30	20:36
			3.9	19.4	4.3	19.9
	Tu	22	2:52	9:02	15:16	21:22
			3.4	20.3	3.5	20.5
E	W	23	3:34	9:42	15:56	22:02
			2.7	21.1	2.6	21.3
	Th	24	4:14	10:20	16:34	22:40
			2.1	22.0	1.7	21.9
○	F	25	4:51	10:55	17:11	23:18
			1.6	22.7	0.9	22.5
	S	26	5:27	11:32	17:50	23:55
			1.3	23.2	0.3	22.8
	S	27	6:04	12:10	18:30	. . .
			1.2	23.6	0.0	. . .
	M	28	0:34	6:43	12:50	19:12
			22.9	1.3	23.6	—0.1
	Tu	29	1:17	7:25	13:34	19:56
			22.8	1.6	23.4	0.2
N	W	30	2:03	8:11	14:22	20:46
			22.3	2.1	22.8	0.8
	Th	31	2:54	9:02	15:14	21:41
			21.6	2.8	22.1	1.5

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	3:51	10:01	16:14	22:42
			20.9	3.5	21.4	2.2
	S	2	4:55	11:07	17:21	23:46
			20.4	3.8	20.9	2.5
P	S	3	6:02	12:18	18:31	. . .
			20.3	3.6	21.0	. . .
	M	4	0:55	7:10	13:26	19:40
			2.4	20.8	2.9	21.4
E	Tu	5	1:58	8:14	14:30	20:42
			2.0	21.8	1.8	22.2
	W	6	2:58	9:10	15:27	21:40
			1.3	22.8	0.7	22.9
	Th	7	3:51	10:01	16:18	22:30
			0.6	23.7	—0.3	23.4
●	F	8	4:41	10:48	17:08	23:19
			0.2	24.2	—0.8	23.4
	S	9	5:27	11:35	17:53	. . .
			0.2	24.4	—0.9	. . .
	S	10	0:05	6:12	12:19	18:38
			23.2	0.5	24.2	—0.6
	M	11	0:49	6:56	13:02	19:23
			22.7	1.2	23.6	0.1
S	Tu	12	1:34	7:40	13:47	20:08
			21.9	2.0	22.7	0.9
	W	13	2:18	8:25	14:32	20:54
			21.1	2.9	21.8	1.8
	Th	14	3:05	9:12	15:19	21:42
			20.3	3.8	20.8	2.7
	F	15	3:54	10:02	16:10	22:32
			19.6	4.6	19.9	3.5
A	S	16	4:46	10:56	17:05	23:26
☽			19.1	5.1	19.3	4.0
	S	17	5:40	11:52	18:00	. . .
			19.0	5.1	19.0	. . .
	M	18	0:19	6:33	12:47	18:54
			4.1	19.3	4.8	19.2
E	Tu	19	1:11	7:24	13:40	19:46
			3.9	19.8	4.2	19.7
	W	20	2:00	8:11	14:28	20:34
			3.5	20.6	3.3	20.4
	Th	21	2:46	8:56	15:13	21:19
			2.9	21.4	2.4	21.1
	F	22	3:30	9:38	15:56	22:04
			2.4	22.2	1.4	21.8
	S	23	4:14	10:21	16:40	22:46
			1.8	23.0	0.5	22.4
○	S	24	4:56	11:03	17:24	23:30
			1.5	23.6	—0.1	22.8
	M	25	5:39	11:46	18:09	. . .
			1.3	24.0	—0.5	. . .
N	Tu	26	0:15	6:22	12:31	18:54
			22.9	1.3	24.0	—0.5
	W	27	1:01	7:08	13:18	19:42
			22.8	1.5	23.8	—0.3
P	Th	28	1:50	7:58	14:08	20:34
			22.5	1.8	23.3	0.2
	F	29	2:42	8:52	15:04	21:29
			22.0	2.3	22.6	0.9
	S	30	3:40	9:52	16:08	22:28
			21.5	2.7	21.9	1.5

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	4:41	10:55	17:07	23:30
			21.2	2.9	21.4	2.0
E	M	2	5:45	12:01	18:14	. . .
			21.2	2.8	21.2	. . .
	Tu	3	0:34	6:48	13:07	19:19
			2.2	21.5	2.4	21.3
	W	4	1:35	7:49	14:08	20:21
			2.1	22.0	1.7	21.6
	Th	5	2:35	8:45	15:07	21:20
			1.8	22.6	1.1	21.8
	F	6	3:30	9:38	16:00	22:12
			1.6	23.1	0.5	22.0
	S	7	4:20	10:28	16:48	23:02
			1.4	23.4	0.2	22.0
●	S	8	5:08	11:15	17:36	23:48
			1.5	23.4	0.2	21.8
S	M	9	5:54	11:59	18:20	. . .
			1.7	23.2	0.4	. . .
	Tu	10	0:32	6:37	12:43	19:04
			21.5	2.2	22.8	0.8
	W	11	1:14	7:19	13:24	19:46
			21.1	2.7	22.1	1.4
	Th	12	1:56	8:01	14:06	20:27
			20.7	3.3	21.4	2.0
	F	13	2:38	8:43	14:49	21:10
			20.3	3.8	20.7	2.6
A	S	14	3:20	9:28	15:33	21:54
			20.0	4.3	20.1	3.1
	S	15	4:04	10:13	16:20	22:40
			19.8	4.5	19.7	3.5
☽	M	16	4:51	11:04	17:10	23:28
			19.8	4.5	19.5	3.7
E	Tu	17	5:40	11:55	18:00	. . .
			20.0	4.3	19.5	. . .
	W	18	0:17	6:30	12:48	18:54
			3.7	20.3	3.8	19.8
	Th	19	1:08	7:20	13:40	19:46
			3.5	20.8	3.2	20.3
	F	20	1:58	8:10	14:31	20:38
			3.2	21.5	2.3	20.8
	S	21	2:49	9:00	15:21	21:29
			2.7	22.3	1.4	21.5
	S	22	3:40	9:48	16:12	22:20
			2.2	23.1	0.5	22.1
N	M	23	4:28	10:38	17:02	23:08
			1.7	23.7	—0.3	22.6
○	Tu	24	5:17	11:28	17:50	23:58
			1.3	24.2	—0.8	23.0
P	W	25	6:07	12:16	18:40	. . .
			1.0	24.4	—1.0	. . .
	Th	26	0:47	6:56	13:06	19:30
			23.2	0.9	24.4	—0.9
	F	27	1:38	7:48	13:58	20:21
			23.1	1.0	24.0	—0.6
	S	28	2:31	8:40	14:52	21:14
			23.0	1.2	23.5	0.0
	S	29	3:25	9:38	15:48	22:10
			22.6	1.5	22.7	0.7
E	M	30	4:22	10:38	16:48	23:08
☾			22.3	1.8	22.1	1.5
	Tu	31	5:21	11:40	17:51	. . .
			22.1	2.0	21.5	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 11.9 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Intercolonial Standard, 60th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:09	7:28	13:54	20:07
			0.5	9.5	−0.6	8.4
	Tu	2	2:06	8:24	14:51	21:06
			0.3	9.9	−1.1	8.6
N	W	3	3:02	9:18	15:47	22:04
			0.2	10.3	−1.5	8.8
○ P	Th	4	3:57	10:12	16:41	22:57
			0.0	10.5	−1.8	9.1
	F	5	4:52	11:06	17:33	23:50
			−0.2	10.7	−1.9	9.2
	S	6	5:45	11:59	18:25	. . .
			−0.3	10.7	−1.9	. . .
	S	7	0:43	6:40	12:53	19:18
			9.4	−0.4	10.4	−1.7
	M	8	1:35	7:35	13:47	20:10
			9.4	−0.3	10.1	−1.3
E	Tu	9	2:27	8:32	14:43	21:02
			9.3	−0.2	9.6	−0.9
	W	10	3:20	9:32	15:42	21:58
			9.2	0.0	9.0	−0.3
☾	Th	11	4:15	10:33	16:45	22:55
			9.1	0.2	8.6	0.2
	F	12	5:12	11:37	17:50	23:55
			8.9	0.3	8.1	0.7
	S	13	6:10	12:41	18:57	. . .
			8.8	0.5	7.8	. . .
	S	14	0:55	7:07	13:40	20:02
			1.0	8.7	0.4	7.6
	M	15	1:58	8:00	14:37	21:02
			1.1	8.8	0.4	7.5
	Tu	16	2:48	8:52	15:27	21:53
			1.2	8.8	0.3	7.5
S A	W	17	3:36	9:38	16:10	22:37
			1.2	8.9	0.2	7.6
	Th	18	4:20	10:20	16:48	23:13
			1.3	8.9	0.1	7.6
●	F	19	4:57	11:00	17:23	23:45
			1.3	8.9	0.0	7.7
	S	20	5:31	11:34	17:55	. . .
			1.3	8.8	−0.1	. . .
	S	21	0:13	6:08	12:09	18:30
			7.8	1.2	8.8	−0.2
	M	22	0:43	6:36	12:45	19:08
			8.1	1.0	8.8	−0.2
	Tu	23	1:17	7:12	13:22	19:40
			8.3	0.8	8.7	−0.2
E	W	24	1:53	7:58	14:02	20:18
			8.6	0.6	8.6	−0.1
	Th	25	2:33	8:38	14:47	21:00
			8.8	0.4	8.5	0.1
	F	26	3:18	9:28	15:36	21:47
			8.9	0.3	8.4	0.4
☽	S	27	4:05	10:24	16:30	22:37
			8.9	0.2	8.1	0.6
	S	28	5:00	11:23	17:31	23:35
			8.9	0.1	7.9	0.8
	M	29	5:58	12:28	18:38	. . .
			9.0	−0.1	7.9	. . .
	Tu	30	0:38	7:00	13:32	19:46
			0.9	9.3	−0.4	8.0
N	W	31	1:43	8:01	14:34	20:50
			0.7	9.6	−0.8	8.3

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	2:45	9:01	15:38	21:50
			0.4	10.0	−1.2	8.7
○	F	2	3:45	10:00	16:27	22:45
			0.0	10.4	−1.5	9.1
	S	3	4:42	10:58	17:18	23:35
			−0.4	10.6	−1.8	9.5
	S	4	5:35	11:47	18:07	. . .
			−0.7	10.7	−1.8	. . .
	M	5	0:24	6:26	12:38	18:56
			9.8	−0.8	10.5	−1.6
E	Tu	6	1:11	7:17	13:30	19:45
			9.9	−0.9	10.1	−1.3
	W	7	2:00	8:10	14:22	20:33
			9.9	−0.7	9.6	−0.7
	Th	8	2:48	9:02	15:17	21:25
			9.5	−0.3	9.0	−0.1
☾	F	9	3:38	10:10	16:13	22:20
			9.2	0.1	8.2	0.6
	S	10	4:33	11:01	17:17	23:17
			8.8	0.4	7.6	1.1
	S	11	5:32	12:05	18:27	. . .
			8.5	0.7	7.2	. . .
	M	12	0:20	6:32	13:09	19:35
			1.5	8.3	0.8	7.1
S	Tu	13	1:23	7:30	14:06	20:37
			1.6	8.3	0.8	7.2
A	W	14	2:22	8:25	14:59	21:27
			1.6	8.4	0.6	7.3
	Th	15	3:12	9:12	15:43	22:07
			1.4	8.5	0.4	7.6
	F	16	3:55	9:56	16:20	22:41
			1.3	8.7	0.2	7.8
	S	17	4:33	10:33	16:54	23:10
			1.1	8.8	0.0	8.1
●	S	18	5:05	11:09	17:25	23:40
			0.9	8.9	−0.2	8.4
	M	19	5:37	11:44	17:58	. . .
			0.6	9.0	−0.4	. . .
E	Tu	20	0:10	6:12	12:20	18:32
			8.7	0.2	9.1	−0.4
	W	21	0:44	6:48	12:56	19:08
			9.0	0.0	9.1	−0.3
	Th	22	1:20	7:29	13:37	19:45
			9.2	−0.2	9.0	−0.2
	F	23	1:59	8:12	14:20	20:26
			9.2	−0.2	8.8	0.1
	S	24	2:42	9:00	15:08	21:12
			9.2	−0.2	8.5	0.5
☽	S	25	3:32	9:56	16:04	22:05
			9.0	−0.1	8.1	0.9
	M	26	4:28	10:58	17:08	23:08
			8.9	0.1	7.7	1.2
N	Tu	27	5:32	12:05	18:20	. . .
			8.8	0.1	7.6	. . .
	W	28	0:18	6:40	13:14	19:33
			1.2	9.0	−0.1	7.8
	Th	29	1:30	7:46	14:20	20:38
			1.0	9.3	−0.4	8.2

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	2:36	8:50	15:17	21:36
			0.5	9.7	−0.9	8.8
	S	2	3:35	9:48	16:10	22:28
			−0.1	10.1	−1.2	9.4
○	S	3	4:30	10:40	17:00	23:14
			−0.6	10.4	−1.5	9.8
E	M	4	5:20	11:32	17:46	23:59
			−1.0	10.4	−1.5	10.1
	Tu	5	6:07	12:20	18:33	. . .
			−1.2	10.3	−1.3	. . .
	W	6	0:45	6:56	13:10	19:20
			10.1	−1.2	9.9	−0.9
	Th	7	1:29	7:44	13:57	20:04
			9.9	−0.9	9.3	−0.3
	F	8	2:14	8:34	14:47	20:50
			9.5	−0.4	8.6	0.4
	S	9	3:02	9:27	15:42	21:42
			9.0	0.1	7.9	1.1
☾	S	10	3:55	10:25	16:43	22:40
			8.6	0.6	7.3	1.6
S	M	11	4:52	11:26	17:50	23:43
			8.2	0.9	6.9	1.9
A	Tu	12	5:54	12:30	18:58	. . .
			7.9	1.1	6.8	. . .
	W	13	0:50	6:55	13:30	19:57
			2.0	7.9	1.0	7.0
	Th	14	1:49	7:51	14:20	20:45
			1.8	8.0	0.8	7.4
	F	15	2:38	8:41	15:08	21:24
			1.5	8.3	0.5	7.8
	S	16	3:21	9:24	15:41	21:58
			1.1	8.5	0.2	8.2
	S	17	3:58	10:03	16:16	22:30
			0.7	8.8	−0.1	8.6
●	M	18	4:32	10:40	16:50	23:02
			0.3	9.0	−0.3	9.0
E	Tu	19	5:07	11:17	17:25	23:38
			−0.1	9.2	−0.4	9.4
	W	20	5:43	11:54	18:01	. . .
			−0.5	9.4	−0.5	. . .
	Th	21	0:10	6:22	12:32	18:38
			9.5	−0.8	9.4	−0.4
	F	22	0:48	7:05	13:14	19:16
			9.6	−0.9	9.2	−0.1
	S	23	1:30	7:50	13:58	19:58
			9.6	−0.8	8.8	0.2
	S	24	2:15	8:40	14:50	20:48
			9.4	−0.6	8.4	0.7
N ☽	M	25	3:08	9:38	15:48	21:47
			9.1	−0.3	8.0	1.1
	Tu	26	4:08	10:41	16:56	22:53
			8.8	0.0	7.6	1.4
	W	27	5:15	11:50	18:09	. . .
			8.6	0.2	7.6	. . .
P	Th	28	0:10	6:25	13:00	19:19
			1.3	8.7	0.1	7.9
	F	29	1:22	7:35	14:08	20:21
			0.9	9.0	−0.2	8.5
	S	30	2:27	8:37	15:00	21:15
			0.3	9.4	−0.6	9.1
	S	31	3:23	9:35	15:52	22:05
			−0.3	9.8	−0.9	9.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	4:13 −0.8	10:26 10.0	16:38 −1.0	22:50 10.0
	Tu	2	5:00 −1.2	11:15 10.0	17:24 −1.0	23:33 10.1
	W	3	5:47 −1.3	12:05 9.7	18:07 −0.7	. . . . .
	Th	4	0:15 10.0	6:32 −1.1	12:48 9.3	18:50 −0.2
	F	5	0:58 9.7	7:18 −0.8	13:35 8.7	19:33 0.3
	S	6	1:43 9.3	8:06 −0.3	14:21 8.1	20:17 0.9
	S	7	2:28 8.8	8:55 0.2	15:12 7.5	21:07 1.5
S	M	8	3:18 8.3	9:48 0.6	16:08 7.1	22:03 1.9
☾ A	Tu	9	4:13 7.9	10:40 1.0	17:09 6.9	23:06 2.1
	W	10	5:12 7.7	11:45 1.1	18:10 6.9	. . . . .
	Th	11	0:10 2.1	6:12 7.6	12:40 1.0	19:05 7.2
	F	12	1:07 1.8	7:07 7.8	13:30 0.8	19:51 7.6
	S	13	1:56 1.4	7:58 8.1	14:15 0.5	20:32 8.1
	S	14	2:39 0.9	8:44 8.4	14:56 0.3	21:10 8.6
E	M	15	3:20 0.3	9:26 8.7	15:35 0.0	21:46 9.1
	Tu	16	3:57 −0.3	10:07 9.1	16:13 −0.2	22:23 9.5
●	W	17	4:36 −0.8	10:47 9.3	16:51 −0.4	23:01 9.8
	Th	18	5:17 −1.1	11:28 9.4	17:28 −0.4	23:40 10.0
	F	19	5:58 −1.3	12:10 9.3	18:08 −0.2	. . . . .
	S	20	0:23 10.0	6:43 −1.3	12:56 9.1	18:51 0.1
	S	21	1:08 9.8	7:32 −1.1	13:45 8.7	19:40 0.4
N P	M	22	1:58 9.5	8:27 −0.8	14:40 8.3	20:33 0.8
	Tu	23	2:53 9.1	9:25 −0.4	15:41 8.0	21:38 1.2
☽	W	24	3:56 8.8	10:30 −0.1	16:48 7.8	22:50 1.3
	Th	25	5:05 8.6	11:37 0.1	17:57 7.9	. . . . .
	F	26	0:04 1.0	6:15 8.6	12:43 0.0	19:02 8.3
	S	27	1:12 0.6	7:22 8.8	13:43 −0.1	20:00 8.8
E	S	28	2:12 0.1	8:24 9.1	14:38 −0.3	20:50 9.3
	M	29	3:05 −0.5	9:20 9.3	15:30 −0.4	21:38 9.6
	Tu	30	3:56 −0.8	10:10 9.3	16:17 −0.3	22:24 9.9

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	4:42 −1.0	10:59 9.2	16:59 −0.2	23:06 9.9
	Th	2	5:27 −1.0	11:45 8.9	17:42 0.1	23:48 9.7
	F	3	6:12 −0.8	12:29 8.5	18:23 0.5	. . . . .
	S	4	0:30 9.4	6:56 −0.5	13:13 8.1	19:05 1.0
S	S	5	1:13 9.0	7:40 −0.2	13:59 7.7	19:48 1.4
	M	6	1:59 8.6	8:26 0.2	14:45 7.4	20:36 1.8
A	Tu	7	2:45 8.1	9:15 0.6	15:34 7.2	21:28 2.0
	W	8	3:35 7.8	10:04 0.8	16:25 7.1	22:25 2.1
☾	Th	9	4:30 7.6	10:56 0.9	17:17 7.2	23:22 1.9
	F	10	5:24 7.6	11:47 0.9	18:07 7.5	. . . . .
	S	11	0:17 1.6	6:18 7.7	12:36 0.8	18:53 8.0
E	S	12	1:06 1.1	7:11 7.9	13:23 0.6	19:38 8.5
	M	13	1:58 0.5	8:00 8.3	14:09 0.3	20:21 8.9
	Tu	14	2:37 −0.1	8:47 8.6	14:52 0.1	21:04 9.4
	W	15	3:22 −0.6	9:32 8.9	15:35 −0.1	21:46 9.9
●	Th	16	4:06 −1.1	10:18 9.1	16:17 −0.2	22:30 10.1
	F	17	4:52 −1.5	11:05 9.2	17:00 −0.1	23:15 10.2
	S	18	5:40 −1.6	11:52 9.1	17:46 0.0	. . . . .
N P	S	19	0:02 10.2	6:28 −1.6	12:43 8.9	18:35 0.2
	M	20	0:52 10.0	7:20 −1.4	13:37 8.7	19:28 0.5
	Tu	21	1:46 9.7	8:15 −1.0	14:33 8.5	20:27 0.7
	W	22	2:43 9.3	9:16 −0.7	15:33 8.3	21:34 0.8
☽	Th	23	3:47 9.0	10:15 −0.3	16:36 8.3	22:43 0.8
	F	24	4:58 8.7	11:18 −0.1	17:38 8.5	23:50 0.6
E	S	25	6:00 8.7	12:20 0.0	18:38 8.8	. . . . .
	S	26	0:55 0.3	7:06 8.7	13:20 0.1	19:33 9.0
	M	27	1:54 −0.1	8:07 8.7	14:15 0.1	20:25 9.3
	Tu	28	2:48 −0.4	9:05 8.6	15:05 0.2	21:13 9.5
	W	29	3:39 −0.5	9:58 8.5	15:53 0.3	21:59 9.6
○	Th	30	4:26 −0.6	10:46 8.4	16:38 0.5	22:43 9.5
	F	31	5:10 −0.6	11:32 8.1	17:20 0.8	23:25 9.4

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	5:58 −0.4	12:15 7.9	18:01 1.1	. . . . .
	S	2	0:07 9.1	6:35 −0.2	12:55 7.7	18:42 1.4
	M	3	0:49 8.7	7:15 0.0	13:35 7.5	19:22 1.6
A	Tu	4	1:32 8.4	7:57 0.2	14:16 7.4	20:05 1.8
	W	5	2:13 8.1	8:40 0.4	14:58 7.5	20:52 1.8
	Th	6	2:59 7.9	9:23 0.6	15:42 7.6	21:41 1.7
☾	F	7	3:47 7.8	10:08 0.8	16:27 7.8	22:33 1.5
	S	8	4:36 7.7	10:55 0.7	17:14 8.1	23:25 1.2
E	S	9	5:28 7.8	11:43 0.6	18:00 8.4	. . . . .
	M	10	0:17 0.8	6:23 8.0	12:32 0.6	18:49 8.8
	Tu	11	1:08 0.2	7:15 8.2	13:20 0.4	19:37 9.2
	W	12	1:58 −0.3	8:08 8.4	14:10 0.3	20:25 9.7
	Th	13	2:50 −0.8	9:00 8.5	14:58 0.2	21:14 10.0
	F	14	3:40 −1.3	9:53 8.8	15:48 0.1	22:05 10.3
● N	S	15	4:32 −1.6	10:45 9.0	16:40 0.0	22:55 10.4
P	S	16	5:22 −1.7	11:38 9.0	17:30 0.0	23:47 10.4
	M	17	6:13 −1.7	12:31 9.0	18:23 0.0	. . . . .
	Tu	18	0:40 10.3	7:07 −1.6	13:25 9.0	19:20 0.1
	W	19	1:35 10.0	8:02 −1.3	14:20 8.9	20:20 0.2
	Th	20	2:32 9.6	8:58 −1.0	15:17 8.9	21:22 0.2
☽ E	F	21	3:33 9.2	9:55 −0.6	16:18 8.9	22:25 0.2
	S	22	4:37 8.8	10:54 −0.2	17:12 9.0	23:29 0.2
	S	23	5:41 8.6	11:58 0.2	18:08 9.0	. . . . .
	M	24	0:32 0.2	6:46 8.8	12:52 0.4	19:05 9.1
	Tu	25	1:34 0.1	7:50 8.1	13:49 0.6	19:58 9.2
	W	26	2:30 0.0	8:50 8.0	14:48 0.7	20:50 9.3
	Th	27	3:22 −0.1	9:46 7.9	15:34 0.9	21:38 9.3
S	F	28	4:10 −0.2	10:36 7.8	16:20 1.0	22:33 9.2
○	S	29	4:55 −0.2	11:20 7.7	17:08 1.2	23:06 9.1
	S	30	5:35 −0.1	12:00 7.6	17:45 1.3	23:47 8.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	6:13	12:35	18:22	. . .
			0.0	7.6	1.4	. . .
	Tu	2	0:26	6:50	13:10	18:58
			8.7	0.0	7.6	1.5
	W	3	1:03	7:27	13:43	19:36
			8.5	0.1	7.7	1.4
	Th	4	1:42	8:08	14:20	20:17
			8.3	0.2	7.9	1.3
	F	5	2:22	8:40	14:58	21:00
			8.2	0.3	8.1	1.2
E	S	6	3:06	9:22	15:40	21:47
			8.0	0.4	8.3	0.9
☾	S	7	3:52	10:07	16:26	22:38
			8.0	0.5	8.5	0.7
	M	8	4:43	10:55	17:13	23:32
			8.0	0.6	8.7	0.4
	Tu	9	5:38	11:45	18:05	. . .
			8.0	0.7	9.0	. . .
	W	10	0:30	6:36	12:39	19:00
			0.1	8.0	0.6	9.3
	Th	11	1:27	7:37	13:35	19:53
			−0.3	8.1	0.6	9.6
	F	12	2:24	8:36	14:31	20:50
			−0.8	8.3	0.4	10.0
N	S	13	3:20	9:34	15:29	21:45
			−1.2	8.6	0.2	10.3
● P	S	14	4:14	10:30	16:23	22:40
			−1.5	8.9	0.0	10.05
	M	15	5:07	11:23	17:18	23:33
			−1.7	9.1	−0.2	10.6
	Tu	16	5:58	12:15	18:13	. . .
			−1.8	9.3	−0.4	. . .
	W	17	0:27	6:50	13:07	19:09
			10.5	−1.7	9.5	−0.5
	Th	18	1:22	7:43	14:00	20:05
			10.3	−1.5	9.5	−0.4
E	F	19	2:15	8:35	14:50	21:00
			9.8	−1.1	9.5	−0.3
	S	20	3:14	9:28	15:45	22:00
			9.3	−0.6	9.3	−0.1
☽	S	21	4:14	10:25	16:40	23:03
			8.8	0.0	9.1	0.1
	M	22	5:17	11:24	17:38	. . .
			8.3	0.5	9.0	. . .
	Tu	23	0:08	6:25	12:25	18:37
			0.3	7.9	0.8	8.9
	W	24	1:12	7:30	13:25	19:35
			0.3	7.6	1.1	8.8
	Th	25	2:12	8:36	14:25	20:28
			0.3	7.6	1.1	8.9
S	F	26	3:05	9:32	15:16	21:20
			0.2	7.6	1.2	8.9
	S	27	3:52	10:20	16:05	22:05
			0.1	7.6	1.2	8.9
○ A	S	28	4:35	11:01	16:47	22:48
			0.1	7.7	1.2	8.9
	M	29	5:13	11:36	17:23	23:25
			0.0	7.8	1.2	8.8
	Tu	30	5:47	12:06	17:58	. . .
			0.0	7.9	1.1	. . .
	W	31	0:08	6:20	12:35	18:30
			8.7	0.0	8.0	1.0

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:36	6:52	13:06	19:04
			8.6	0.0	8.2	0.9
E	F	2	1:10	7:26	13:38	19:40
			8.6	0.0	8.5	0.7
	S	3	1:47	8:02	14:16	20:20
			8.5	0.2	8.6	0.5
	S	4	2:30	8:40	14:56	21:09
			8.4	0.3	8.7	0.4
☾	M	5	3:14	9:24	15:42	22:00
			8.3	0.5	8.8	0.3
	Tu	6	4:06	10:12	16:32	22:56
			8.1	0.7	8.8	0.2
	W	7	5:02	11:05	17:30	23:58
			7.9	0.9	8.9	0.0
	Th	8	6:06	12:05	18:30	. . .
			7.8	1.0	9.1	. . .
N	F	9	1:00	7:13	13:10	19:32
			−0.2	7.9	0.9	9.4
	S	10	2:03	8:18	14:14	20:32
			−0.6	8.1	0.6	9.8
	S	11	3:02	9:18	15:14	21:30
			−1.0	8.6	0.2	10.2
P ●	M	12	3:57	10:14	16:12	22:26
			−1.4	9.0	−0.3	10.5
	Tu	13	4:50	11:06	17:06	23:19
			−1.7	9.5	−0.7	10.7
	W	14	5:40	11:54	17:58	. . .
			−1.8	9.8	−1.0	. . .
E	Th	15	0:11	6:30	12:42	18:50
			10.6	−1.7	10.0	−1.1
	F	16	1:03	7:18	13:31	19:41
			10.3	−1.4	10.0	−1.0
	S	17	1:55	8:08	14:20	20:36
			9.9	−0.9	9.8	−0.7
	S	18	2:50	9:00	15:12	21:34
			9.2	−0.3	9.4	−0.3
☽	M	19	3:47	9:54	16:08	22:35
			8.5	0.4	9.0	0.1
	Tu	20	4:51	10:52	17:07	23:40
			7.9	0.9	8.7	0.5
	W	21	6:00	11:57	18:10	. . .
			7.4	1.3	8.5	. . .
S	Th	22	0:45	7:11	13:02	19:11
			0.6	7.3	1.5	8.5
	F	23	1:46	8:15	14:03	20:08
			0.6	7.4	1.4	8.5
	S	24	2:41	9:09	14:57	21:00
			0.5	7.5	1.3	8.6
A	S	25	3:28	9:53	15:42	21:44
			0.3	7.7	1.1	8.7
	M	26	4:08	10:30	16:22	22:23
			0.2	7.9	1.0	8.8
○	Tu	27	4:40	11:00	16:56	22:58
			0.0	8.1	0.8	8.8
	W	28	5:14	11:28	17:28	23:32
			−0.1	8.3	0.6	8.8
E	Th	29	5:45	11:56	18:00	. . .
			−0.1	8.6	0.4	. . .
	F	30	0:06	6:18	12:28	18:34
			8.8	−0.1	8.8	0.2
	S	31	0:40	6:50	13:01	19:10
			8.8	−0.1	9.0	0.0

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:18	7:24	13:37	19:50
			8.8	0.1	9.0	−0.1
	M	2	1:57	8:02	14:20	20:37
			8.6	0.3	9.0	−0.1
	Tu	3	2:44	8:48	15:06	21:29
			8.3	0.6	8.9	0.0
☾	W	4	3:36	9:37	16:01	22:29
			8.0	0.9	8.8	0.1
N	Th	5	4:38	10:37	17:01	23:35
			7.7	1.2	8.7	0.1
	F	6	5:46	11:44	18:07	. . .
			7.6	1.3	8.8	. . .
	S	7	0:42	6:58	12:56	19:15
			0.0	7.8	1.0	9.1
	S	8	1:46	8:04	14:03	20:18
			−0.3	8.2	0.6	9.6
P	M	9	2:46	9:02	15:08	21:18
			−0.8	8.8	−0.1	10.0
●	Tu	10	3:40	9:55	15:57	22:12
			−1.2	9.4	−0.7	10.4
E	W	11	4:30	10:44	16:50	23:04
			−1.5	9.9	−1.2	10.5
	Th	12	5:17	11:30	17:38	23:52
			−1.5	10.2	−1.4	10.4
	F	13	6:04	12:15	18:28	. . .
			−1.4	10.3	−1.4	. . .
	S	14	0:42	6:51	13:01	19:18
			10.1	−1.0	10.1	−1.2
	S	15	1:32	7:38	13:48	20:10
			9.5	−0.4	9.8	−0.8
	M	16	2:24	8:30	14:40	21:05
			8.8	0.2	9.3	−0.3
	Tu	17	3:20	9:22	15:34	22:05
			8.1	0.9	8.8	0.3
☽ S	W	18	4:24	10:22	16:34	23:09
			7.5	1.4	8.4	0.7
	Th	19	5:34	11:29	17:38	. . .
			7.2	1.7	8.1	. . .
	F	20	0:14	6:42	12:37	18:42
			0.8	7.1	1.8	8.1
A	S	21	1:14	7:43	13:38	19:40
			0.8	7.3	1.6	8.2
	S	22	2:07	8:32	14:29	20:31
			0.6	7.6	1.3	8.3
	M	23	2:53	9:12	15:11	21:15
			0.4	7.9	1.0	8.5
	Tu	24	3:30	9:46	15:48	21:58
			0.2	8.3	0.7	8.7
	W	25	4:04	10:17	16:21	22:28
			0.1	8.6	0.3	8.8
E ○	Th	26	4:36	10:47	16:54	23:02
			−0.1	8.9	0.0	9.0
	F	27	5:08	11:18	17:28	23:36
			−0.1	9.2	−0.3	9.0
	S	28	5:40	11:50	18:04	. . .
			−0.2	9.3	−0.6	. . .
	S	29	0:12	6:15	12:26	18:42
			9.0	−0.1	9.4	−0.7
	M	30	0:51	6:50	13:05	19:25
			8.9	0.1	9.4	−0.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:34	7:31	13:48	20:14
			8.6	0.4	9.3	−0.5
	W	2	2:22	8:18	14:40	21:09
			8.3	0.7	9.0	−0.3
N ☾	Th	3	3:18	9:14	15:37	22:10
			8.0	1.1	8.8	0.0
	F	4	4:23	10:20	16:42	23:18
			7.7	1.4	8.6	0.1
	S	5	5:35	11:35	17:54	. . .
			7.6	1.3	8.7	. . .
	☉	6	0:25	6:45	12:47	19:02
			0.1	7.9	0.9	8.9
P	M	7	1:30	7:47	13:53	20:06
			−0.2	8.5	0.3	9.3
	Tu	8	2:26	8:42	14:50	21:04
			−0.6	9.1	−0.3	9.7
E	W	9	3:20	9:33	15:42	21:58
			−0.9	9.7	−0.9	10.0
●	Th	10	4:07	10:20	16:32	22:47
			−1.1	10.1	−1.4	10.1
	F	11	4:55	11:04	17:20	23:35
			−1.0	10.3	−1.5	9.9
	S	12	5:38	11:48	18:06	. . .
			−0.8	10.3	−1.4	. . .
	☉	13	0:22	6:24	12:33	18:55
			9.5	−0.4	10.0	−1.1
	M	14	1:11	7:09	13:20	19:45
			8.9	0.2	9.6	−0.7
	Tu	15	2:01	7:58	14:08	20:36
			8.3	0.8	9.1	−0.2
S	W	16	2:54	8:50	15:02	21:33
			7.8	1.3	8.6	0.3
☽	Th	17	3:54	9:50	16:00	22:33
			7.3	1.8	8.1	0.7
	F	18	5:00	10:58	17:02	23:33
			7.1	2.0	7.8	0.9
A	S	19	6:01	12:02	18:03	. . .
			7.1	1.9	7.7	. . .
	☉	20	0:30	6:58	13:00	19:01
			0.9	7.4	1.7	7.8
	M	21	1:20	7:42	13:49	19:52
			0.8	7.7	1.3	8.0
	Tu	22	2:05	8:23	14:31	20:35
			0.6	8.2	0.8	8.3
E	W	23	2:44	8:58	15:07	21:16
			0.4	8.6	0.4	8.5
	Th	24	3:21	9:32	15:44	21:54
			0.2	8.9	−0.1	8.8
○	F	25	3:56	10:07	16:20	22:30
			0.1	9.3	−0.5	8.9
	S	26	4:30	10:42	16:57	23:08
			0.0	9.6	−0.9	9.0
	☉	27	5:06	11:18	17:37	23:48
			−0.1	9.8	−1.1	9.0
	M	28	5:45	11:58	18:20	. . .
			0.0	9.8	−1.2	. . .
	Tu	29	0:30	6:24	12:42	19:08
			8.9	0.2	9.7	−1.1
N	W	30	1:18	7:10	13:28	20:00
			8.7	0.5	9.4	−0.8
	Th	31	2:10	8:03	14:22	20:55
			8.4	0.8	9.1	−0.5

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	3:08	9:04	15:22	21:56
			8.1	1.1	8.8	−0.2
	S	2	4:14	10:14	16:28	23:01
			7.9	1.2	8.6	0.0
P	☉	3	5:21	11:28	17:40	. . .
			8.0	1.1	8.6	. . .
	M	4	0:08	6:27	12:36	18:48
			0.0	8.3	0.7	8.7
E	Tu	5	1:08	7:26	13:38	19:52
			−0.1	8.8	0.1	9.0
	W	6	2:05	8:20	14:35	20:50
			−0.3	9.3	−0.5	9.3
	Th	7	2:58	9:08	15:26	21:44
			−0.4	9.7	−1.0	9.3
●	F	8	3:46	9:55	16:16	22:33
			−0.4	10.0	−1.2	9.3
	S	9	4:33	10:40	17:08	23:20
			−0.3	10.2	−1.3	9.1
	☉	10	5:16	11:25	17:48	. . .
			−0.1	10.1	−1.2	. . .
	M	11	0:07	6:00	12:10	18:35
			8.7	0.3	9.8	−0.9
S	Tu	12	0:54	6:45	12:55	19:21
			8.3	0.7	9.4	−0.5
	W	13	1:40	7:32	13:40	20:10
			7.9	1.2	8.9	−0.1
	Th	14	2:30	8:24	14:30	21:00
			7.6	1.6	8.4	0.3
	F	15	3:21	9:18	15:24	21:53
			7.3	1.8	8.0	0.7
A ☽	S	16	4:16	10:16	16:19	22:45
			7.3	1.9	7.7	0.8
	☉	17	5:09	11:15	17:15	23:38
			7.3	1.9	7.6	0.9
	M	18	6:00	12:09	18:10	. . .
			7.6	1.6	7.6	. . .
E	Tu	19	0:26	6:45	12:58	19:01
			0.9	7.9	1.2	7.7
	W	20	1:10	7:28	13:42	19:50
			0.8	8.4	0.7	8.0
	Th	21	1:55	8:08	14:24	20:33
			0.6	8.8	0.2	8.3
	F	22	2:35	8:48	15:06	21:18
			0.4	9.2	−0.3	8.6
	S	23	3:16	9:30	15:48	22:00
			0.2	9.6	−0.8	8.8
○	☉	24	3:56	10:10	16:32	22:44
			0.1	9.9	−1.2	8.9
	M	25	4:38	10:53	17:18	23:30
			0.1	10.1	−1.5	8.9
N	Tu	26	5:20	11:38	18:04	. . .
			0.1	10.1	−1.5	. . .
	W	27	0:17	6:08	12:26	18:54
			8.9	0.2	10.0	−1.4
P	Th	28	1:07	6:58	13:16	19:46
			8.8	0.4	9.7	−1.1
	F	29	2:01	7:54	14:12	20:41
			8.6	0.6	9.4	−0.8
	S	30	2:57	8:58	15:10	21:41
			8.4	0.8	9.1	−0.4

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	☉	1	4:00	10:04	16:15	22:42
			8.4	0.8	8.8	−0.1
E	M	2	5:00	11:13	17:23	23:44
			8.5	0.6	8.6	0.0
	Tu	3	6:01	12:18	18:30	. . .
			8.7	0.4	8.6	. . .
	W	4	0:44	7:00	13:20	19:35
			0.2	9.0	0.0	8.6
	Th	5	1:42	7:54	14:20	20:35
			0.2	9.3	−0.3	8.6
	F	6	2:37	8:46	15:12	21:31
			0.2	9.6	−0.6	8.6
	S	7	3:27	9:35	16:02	22:23
			0.2	9.8	−0.8	8.5
●	☉	8	4:15	10:22	16:50	23:12
			0.4	9.8	−0.8	8.3
S	M	9	5:00	11:07	17:35	23:57
			0.6	9.7	−0.7	8.2
	Tu	10	5:45	11:51	18:18	. . .
			0.8	9.5	−0.6	. . .
	W	11	0:40	6:28	12:34	19:02
			8.0	1.1	9.1	−0.3
	Th	12	1:22	7:10	13:17	19:43
			7.8	1.3	8.7	0.0
	F	13	2:02	7:55	14:00	20:26
			7.7	1.5	8.3	0.2
A	S	14	2:45	8:42	14:47	21:10
			7.6	1.6	8.0	0.5
	☉	15	3:28	9:30	15:33	21:53
			7.6	1.7	7.8	0.7
☽	M	16	4:12	10:20	16:22	22:38
			7.7	1.6	7.6	0.9
E	Tu	17	4:58	11:10	17:13	23:26
			7.9	1.4	7.5	0.9
	W	18	5:45	12:01	18:06	. . .
			8.2	1.0	7.6	. . .
	Th	19	0:15	6:32	12:52	19:00
			0.9	8.5	0.6	7.8
	F	20	1:02	7:18	13:42	19:51
			0.8	8.9	0.1	8.0
	S	21	1:51	8:07	14:32	20:42
			0.7	9.3	−0.4	8.2
	☉	22	2:40	8:55	15:22	21:33
			0.5	9.7	−0.9	8.5
N ○	M	23	3:28	9:43	16:11	22:33
			0.3	10.0	−1.3	8.8
	Tu	24	4:17	10:32	17:00	23:14
			0.2	10.3	−1.6	8.9
P	W	25	5:06	11:22	17:50	. . .
			0.0	10.4	−1.7	. . .
	Th	26	0:05	5:57	12:13	18:40
			9.0	0.0	10.3	−1.7
	F	27	0:56	6:50	13:05	19:32
			9.1	0.0	10.1	−1.5
	S	28	1:48	7:47	14:00	20:25
			9.1	0.0	9.8	−1.1
	☉	29	2:41	8:45	14:57	21:20
			9.1	0.1	9.4	−0.7
E ☾	M	30	3:37	9:47	15:58	22:16
			9.0	0.2	8.9	−0.3
	Tu	31	4:34	10:50	17:02	23:16
			9.0	0.2	8.6	−0.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:45 0.7	8:00 10.0	14:25 −0.4	20:30 8.8
	Tu	2	2:37 0.5	8:54 10.4	15:22 −0.8	21:27 8.9
N	W	3	3:32 0.3	9:50 10.8	16:17 −1.2	22:21 9.2
○ P	Th	4	4:26 0.0	10:44 11.1	17:10 −1.5	23:15 9.4
	F	5	5:20 −0.2	11:37 11.3	18:02 −1.7	. . . . .
	S	6	0:10 9.6	6:14 −0.4	12:30 11.3	18:54 −1.6
	S	7	1:02 9.7	7:08 −0.5	13:23 11.0	19:45 −1.5
	M	8	1:55 9.8	8:03 −0.4	14:17 10.6	20:37 −1.1
E	Tu	9	2:50 9.8	9:00 −0.2	15:12 10.1	21:31 −0.7
	W	10	3:45 9.7	9:57 0.0	16:09 9.6	22:25 −0.2
☾	Th	11	4:40 9.5	10:58 0.3	17:08 9.0	23:20 0.3
	F	12	5:37 9.4	11:58 0.6	18:09 8.5	. . . . .
	S	13	0:18 0.7	6:34 9.3	13:00 0.7	19:12 8.1
	S	14	1:15 1.0	7:30 9.2	13:56 0.7	20:13 7.9
	M	15	2:09 1.2	8:22 9.3	14:52 0.7	21:09 7.8
	Tu	16	3:01 1.3	9:12 9.4	15:40 0.6	21:59 7.8
S A	W	17	3:52 1.3	9:57 9.4	16:28 0.4	22:40 7.8
	Th	18	4:30 1.3	10:38 9.5	17:08 0.2	23:18 7.9
●	F	19	5:10 1.3	11:18 9.5	17:40 0.1	23:52 8.1
	S	20	5:47 1.2	11:56 9.5	18:17 0.0	. . . . .
	S	21	0:20 8.3	6:28 1.1	12:33 9.5	18:54 −0.1
	M	22	1:00 8.6	7:00 1.0	13:10 9.4	19:31 −0.1
	Tu	23	1:35 8.7	7:40 0.9	13:50 9.3	20:10 0.1
E	W	24	2:16 8.9	8:22 0.8	14:32 9.1	20:50 0.3
	Th	25	2:59 9.0	9:10 0.7	15:17 8.9	21:35 0.6
	F	26	3:45 9.0	10:01 0.7	16:07 8.6	22:22 0.9
☽	S	27	4:36 9.1	10:58 0.6	17:00 8.3	23:14 1.1
	S	28	5:32 9.2	11:58 0.5	18:00 8.2	. . . . .
	M	29	0:12 1.2	6:32 9.4	13:01 0.2	19:04 8.1
	Tu	30	1:12 1.1	7:33 9.7	14:03 0.0	20:08 8.3
N	W	31	2:15 0.9	8:34 10.1	15:04 −0.4	21:11 8.6

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	3:15 0.5	9:38 10.5	16:00 −0.8	22:10 9.0
○	F	2	4:13 0.0	10:30 10.9	16:55 −1.2	23:04 9.5
	S	3	5:08 −0.4	11:24 11.2	17:46 −1.5	23:56 9.9
	S	4	6:01 −0.8	12:16 11.2	18:35 −1.5	. . . . .
	M	5	0:46 10.2	6:53 −0.9	13:07 11.1	19:24 −1.5
E	Tu	6	1:35 10.3	7:44 −0.9	13:58 10.7	20:12 −1.1
	W	7	2:24 10.2	8:35 −0.7	14:49 10.1	21:01 −0.7
	Th	8	3:14 10.0	9:30 −0.3	15:40 9.5	21:52 −0.1
☾	F	9	4:06 9.7	10:25 0.2	16:35 8.8	22:45 0.5
	S	10	5:00 9.4	11:22 0.6	17:33 8.1	23:42 1.1
	S	11	5:55 9.1	12:22 0.9	18:35 7.7	. . . . .
	M	12	0:38 1.4	6:52 8.9	13:22 1.1	19:38 7.4
S	Tu	13	1:36 1.7	7:48 8.8	14:18 1.1	20:38 7.4
A	W	14	2:30 1.7	8:40 8.9	15:08 0.9	21:28 7.5
	Th	15	3:19 1.6	9:28 9.0	15:53 0.7	22:10 7.7
	F	16	4:08 1.4	10:10 9.2	16:33 0.4	22:47 8.1
	S	17	4:42 1.2	10:51 9.4	17:11 0.1	23:20 8.4
●	S	18	5:20 0.9	11:30 9.6	17:47 −0.1	23:54 8.8
	M	19	5:57 0.6	12:06 9.7	18:23 −0.2	. . . . .
E	Tu	20	0:29 9.1	6:36 0.3	12:45 9.7	19:00 −0.2
	W	21	1:06 9.3	7:15 0.1	13:25 9.6	19:37 −0.1
	Th	22	1:45 9.5	7:57 0.0	14:06 9.4	20:18 0.2
	F	23	2:28 9.5	8:45 0 1	14:51 9.0	21:01 0.6
	S	24	3:15 9.4	9:36 0.2	15:40 8.7	21:48 1.0
☽	S	25	4:07 9.3	10:33 0.3	16:35 8.3	22:45 1.3
	M	26	5:05 9.2	11:35 0.4	17:37 8.0	23:47 1.5
N	Tu	27	6:08 9.3	12:40 0.4	18:40 . 7 9	. . . . .
	W	28	0:53 1.3	7:13 9.4	13:45 0.3	19:50 8.0
	Th	29	2:00 1.0	8:18 9.8	14:47 0.0	20:57 8.5

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	3:08 0.5	9:20 10.2	15:44 −0.5	21:55 9.1
	S	2	4:02 −0.1	9:17 10.6	16:37 −1.1	22:48 9.7
○	S	3	4:55 −0.7	11:10 10.9	17:27 −1.3	23:37 10.2
E	M	4	5:46 −1.0	12:00 11.0	18:14 −1.3	. . . . .
	Tu	5	0:24 10.5	6:35 −1.2	12:48 10.8	18:59 −1.2
	W	6	1:10 10.6	7:22 −1.2	13:35 10.4	19:45 −0.8
	Th	7	1:56 10.4	8:10 −0.8	14:22 9.8	20:30 −0.3
	F	8	2:42 10.1	9:00 −0.4	15:11 9.2	21:18 0.3
	S	9	3:32 9.7	9:52 0.1	16:02 8.5	22:08 1.0
☾	S	10	4:22 9.2	10:47 0.7	16:57 7.9	23:08 1.5
S	M	11	5:17 8.8	11:43 1.0	17:55 7.4	. . . . .
A	Tu	12	0:00 1.9	6:13 8.5	12:41 1.3	18:57 7.2
	W	13	0:59 2.0	7:10 8.4	13:38 1.3	19:56 7.3
	Th	14	1:55 2.0	8:08 8.5	14:30 1.1	20:47 7.5
	F	15	2:45 1.7	8:52 8.7	15:15 0.8	21:30 7.9
	S	16	3:30 1.3	9:38 9.0	15:57 0.5	22:07 8.4
	S	17	4:10 0.8	10:20 9.3	16:37 0.1	22:45 8.9
●	M	18	4:50 0.4	11:00 9.6	17.14 −0.1	23:21 9.3
E	Tu	19	5:30 0.0	11:40 9.8	17:50 −0.2	23:48 9.7
	W	20	6:10 −0.4	12:20 9.8	18:29 −0.2	. . . . .
	Th	21	0:37 9.9	6:52 −0.6	13:00 9.8	19:08 0.0
	F	22	1:17 10.0	7:36 −0.6	13:43 9.5	19:50 0.3
	S	23	2:02 9.9	8:23 −0.5	14:30 9.2	20:35 0.7
	S	24	2:52 9.7	9:17 −0 2	15:23 8.7	21:27 1.1
N ☽	M	25	3:46 9.5	10:15 0.1	16:18 8.3	22:26 1.4
	Tu	26	4:45 9.2	11:17 0.3	17:22 8.0	23:32 1.5
	W	27	5:51 9.1	12:22 0.5	18:31 7.9	. . . . .
P	Th	28	0:41 1.3	6:59 9.2	13:28 0.4	19:39 8.2
	F	29	1:49 0.9	8:05 9.5	14:30 0.1	20:42 8.8
	S	30	2:52 0.3	9:06 9.9	15:26 −0.2	21:37 9.4
	S	31	3:47 −0.3	10:02 10.2	16:17 −0.6	22:28 10.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3.47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	4:13 −0.8	10:26 10.0	16:38 −1.0	22:50 10.0
	Tu	2	5:00 −1.2	11:15 10.0	17:24 −1.0	23:33 10.1
	W	3	5:47 −1.3	12:05 9.7	18:07 −0.7	. . . . .
	Th	4	0:15 10.0	6:32 −1.1	12:48 9.3	18:50 −0.2
	F	5	0:58 9.7	7:18 −0.8	13:35 8.7	19:33 0.3
	S	6	1:43 9.3	8:06 −0.3	14:21 8.1	20:17 0.9
	S	7	2:28 8.8	8:55 0.2	15:12 7.5	21:07 1.5
S	M	8	3:18 8.3	9:48 0.6	16:08 7.1	22:03 1.9
☾ A	Tu	9	4:13 7.9	10:40 1.0	17:09 6.9	23:06 2.1
	W	10	5:12 7.7	11:45 1.1	18:10 6.9	. . . . .
	Th	11	0:10 2.1	6:12 7.6	12:40 1.0	19:05 7.2
	F	12	1:07 1.8	7:07 7.8	13:30 0.8	19:51 7.6
	S	13	1:56 1.4	7:58 8.1	14:15 0.5	20:32 8.1
	S	14	2:39 0.9	8:44 8.4	14:56 0.3	21:10 8.6
E	M	15	3:20 0.3	9:26 8.7	15:35 0.0	21:46 9.1
	Tu	16	3:57 −0.3	10:07 9.1	16:13 −0.2	22:23 9.5
●	W	17	4:36 −0.8	10:47 9.3	16:51 −0.4	23:01 9.8
	Th	18	5:17 −1.1	11:28 9.4	17:28 −0.4	23:40 10.0
	F	19	5:58 −1.3	12:10 9.3	18:08 −0.2	. . . . .
	S	20	0:23 10.0	6:43 −1.3	12:56 9.1	18:51 0.1
	S	21	1:08 9.8	7:32 −1.1	13:45 8.7	19:40 0.4
N P	M	22	1:58 9.5	8:27 −0.8	14:40 8.3	20:33 0.8
	Tu	23	2:53 9.1	9:25 −0.4	15:41 8.0	21:38 1.2
☽	W	24	3:56 8.8	10:30 −0.1	16:48 7.8	22:50 1.3
	Th	25	5:05 8.6	11:37 0.1	17:57 7.9	. . . . .
	F	26	0:04 1.0	6:15 8.6	12:43 0.0	19:02 8.3
	S	27	1:12 0.6	7:22 8.8	13:43 −0.1	20:00 8.8
E	S	28	2:12 0.1	8:24 9.1	14:38 −0.3	20:50 9.3
	M	29	3:05 −0.5	9:20 9.3	15:30 −0.4	21:38 9.6
	Tu	30	3:56 −0.8	10:10 9.3	16:17 −0.3	22:24 9.9

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	4:42 −1.0	10:59 9.2	16:59 −0.2	23:06 9.9
	Th	2	5:27 −1.0	11:45 8.9	17:42 0.1	23:48 9.7
	F	3	6:12 −0.8	12:29 8.5	18:23 0.5	. . . . .
	S	4	0:30 9.4	6:56 −0.5	13:13 8.1	19:05 1.0
S	S	5	1:13 9.0	7:40 −0.2	13:59 7.7	19:48 1.4
	M	6	1:59 8.6	8:26 0.2	14:45 7.4	20:36 1.8
A	Tu	7	2:45 8.1	9:15 0.6	15:34 7.2	21:28 2.0
	W	8	3:35 7.8	10:04 0.8	16:25 7.1	22:25 2.1
☾	Th	9	4:30 7.6	10:56 0.9	17:17 7.2	23:22 1.9
	F	10	5:24 7.6	11:47 0.9	18:07 7.5	. . . . .
	S	11	0:17 1.6	6:18 7.7	12:36 0.8	18:53 8.0
E	S	12	1:06 1.1	7:11 7.9	13:23 0.6	19:38 8.5
	M	13	1:58 0.5	8:00 8.3	14:09 0.3	20:21 8.9
	Tu	14	2:37 −0.1	8:47 8.6	14:52 0.1	21:04 9.4
	W	15	3:22 −0.6	9:32 8.9	15:35 −0.1	21:46 9.9
●	Th	16	4:06 −1.1	10:18 9.1	16:17 −0.2	22:30 10.1
	F	17	4:52 −1.5	11:05 9.2	17:00 −0.1	23:15 10.2
	S	18	5:40 −1.6	11:52 9.1	17:46 0.0	. . . . .
N P	S	19	0:02 10.2	6:28 −1.6	12:43 8.9	18:35 0.2
	M	20	0:52 10.0	7:20 −1.4	13:37 8.7	19:28 0.5
	Tu	21	1:46 9.7	8:15 −1.0	14:33 8.5	20:27 0.7
	W	22	2:43 9.3	9:16 −0.7	15:33 8.3	21:34 0.8
☽	Th	23	3:47 9.0	10:15 −0.3	16:36 8.3	22:43 0.8
	F	24	4:53 8.7	11:18 −0.1	17:38 8.5	23:50 0.6
E	S	25	6:00 8.7	12:20 0.0	18:38 8.8	. . . . .
	S	26	0:55 0.3	7:06 8.7	13:20 0.1	19:33 9.0
	M	27	1:54 −0.1	8:07 8.7	14:15 0.1	20:25 9.3
	Tu	28	2:48 −0.4	9:05 8.6	15:05 0.2	21:13 9.5
	W	29	3:39 −0.5	9:58 8.5	15:53 0.3	21:59 9.6
○	Th	30	4:26 −0.6	10:46 8.4	16:38 0.5	22:43 9.5
	F	31	5:10 −0.6	11:32 8.1	17:20 0.8	23:25 9.4

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	5:58 −0.4	12:15 7.9	18:01 1.1	. . . . .
	S	2	0:07 9.1	6:35 −0.2	12:55 7.7	18:42 1.4
	M	3	0:49 8.7	7:15 0.0	13:35 7.5	19:22 1.6
A	Tu	4	1:32 8.4	7:57 0.2	14:16 7.4	20:05 1.8
	W	5	2:13 8.1	8:40 0.4	14:58 7.5	20:52 1.8
	Th	6	2:59 7.9	9:23 0.6	15:42 7.6	21:41 1.7
☾	F	7	3:47 7.8	10:08 0.8	16:27 7.8	22:33 1.5
	S	8	4:36 7.7	10:55 0.7	17:14 8.1	23:25 1.2
E	S	9	5:28 7.8	11:43 0.6	18:00 8.4	. . . . .
	M	10	0:17 0.8	6:23 8.0	12:32 0.6	18:49 8.8
	Tu	11	1:08 0.2	7:15 8.2	13:20 0.4	19:37 9.2
	W	12	1:58 −0.3	8:08 8.4	14:10 0.3	20:25 9.7
	Th	13	2:50 −0.8	9:00 8.5	14:58 0.2	21:14 10.0
	F	14	3:40 −1.3	9:53 8.8	15:48 0.1	22:05 10.3
● N	S	15	4:32 −1.6	10:45 9.0	16:40 0.0	22:55 10.4
P	S	16	5:22 −1.7	11:38 9.0	17:30 0.0	23:47 10.4
	M	17	6:13 −1.7	12:31 9.0	18:23 0.0	. . . . .
	Tu	18	0:40 10.3	7:07 −1.6	13:25 9.0	19:20 0.1
	W	19	1:35 10.0	8:02 −1.3	14:20 8.9	20:20 0.2
	Th	20	2:32 9.6	8:58 −1.0	15:17 8.9	21:22 0.2
☽ E	F	21	3:33 9.2	9:55 −0.6	16:18 8.9	22:25 0.2
	S	22	4:37 8.8	10:54 −0.2	17:12 9.0	23:29 0.2
	S	23	5:41 8.6	11:58 0.2	18:08 9.0	. . . . .
	M	24	0:32 0.2	6:46 8.8	12:52 0.4	19:05 9.1
	Tu	25	1:34 0.1	7:50 8.1	13:49 0.6	19:58 9.2
	W	26	2:30 0.0	8:50 8.0	14:43 0.7	20:50 9.3
	Th	27	3:22 −0.1	9:46 7.9	15:34 0.9	21:38 9.3
S	F	28	4:10 −0.2	10:36 7.8	16:20 1.0	22:33 9.2
○	S	29	4:55 −0.2	11:20 7.7	17:08 1.2	23:06 9.1
	S	30	5:35 −0.1	12:00 7.6	17:45 1.3	23:47 8.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	6:18	12:35	18:22	. . .
			0.0	7.6	1.4	. . .
	Tu	2	0:26	6:50	13:10	18:58
			8.7	0.0	7.6	1.5
	W	3	1:08	7:27	13:48	19:36
			8.5	0.1	7.7	1.4
	Th	4	1:42	8:08	14:20	20:17
			8.3	0.2	7.9	1.3
	F	5	2:22	8:40	14:58	21:00
			8.2	0.3	8.1	1.2
E	S	6	3:06	9:22	15:40	21:47
			8.0	0.4	8.3	0.9
☾	S	7	3:52	10:07	16:26	22:38
			8.0	0.5	8.5	0.7
	M	8	4:43	10:55	17:13	23:32
			8.0	0.6	8.7	0.4
	Tu	9	5:38	11:45	18:05	. . .
			8.0	0.7	9.0	. . .
	W	10	0:30	6:36	12:39	19:00
			0.1	8.0	0.6	9.3
	Th	11	1:27	7:37	13:35	19:58
			−0.3	8.1	0.6	9.6
	F	12	2:24	8:36	14:31	20:50
			−0.8	8.3	0.4	10.0
N	S	13	3:20	9:34	15:29	21:45
			−1.2	8.6	0.2	10.3
● P	S	14	4:14	10:30	16:23	22:40
			−1.5	8.9	0.0	10.05
	M	15	5:07	11:23	17:18	23:33
			−1.7	9.1	−0.2	10.6
	Tu	16	5:58	12:15	18:13	. . .
			−1.8	9.3	−0.4	. . .
	W	17	0:27	6:50	13:07	19:09
			10.5	−1.7	9.5	−0.5
	Th	18	1:22	7:43	14:00	20:05
			10.3	−1.5	9.5	−0.4
E	F	19	2:15	8:35	14:50	21:00
			9.8	−1.1	9.5	−0.3
	S	20	3:14	9:28	15:45	22:00
			9.3	−0.6	9.3	−0.1
☽	S	21	4:14	10:25	16:40	23:03
			8.8	0.0	9.1	0.1
	M	22	5:17	11:24	17:38	. . .
			8.3	0.5	9.0	. . .
	Tu	23	0:08	6:25	12:25	18:37
			0.3	7.9	0.8	8.9
	W	24	1:12	7:30	13:25	19:35
			0.3	7.6	1.1	8.8
	Th	25	2:12	8:36	14:25	20:28
			0.3	7.6	1.1	8.9
S	F	26	3:05	9:32	15:16	21:20
			0.2	7.6	1.2	8.9
	S	27	3:52	10:20	16:05	22:05
			0.1	7.6	1.2	8.9
○ A	S	28	4:35	11:01	16:47	22:48
			0.1	7.7	1.2	8.9
	M	29	5:18	11:36	17:23	23:25
			0.0	7.8	1.2	8.8
	Tu	30	5:47	12:06	17:58	. . .
			0.0	7.9	1.1	. . .
	W	31	0:08	6:20	12:35	18:30
			8.7	0.0	8.0	1.0

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:36	6:52	13:06	19:04
			8.6	0.0	8.2	0.9
E	F	2	1:10	7:26	13:38	19:40
			8.6	0.0	8.5	0.7
	S	3	1:47	8:02	14:16	20:20
			8.5	0.2	8.6	0.5
	S	4	2:30	8:40	14:56	21:09
			8.4	0.3	8.7	0.4
☾	M	5	3:14	9:24	15:42	22:00
			8.3	0.5	8.8	0.3
	Tu	6	4:06	10:12	16:32	22:56
			8.1	0.7	8.8	0.2
	W	7	5:02	11:05	17:30	23:58
			7.9	0.9	8.9	0.0
	Th	8	6:06	12:05	18:30	. . .
			7.8	1.0	9.1	. . .
N	F	9	1:00	7:13	13:10	19:32
			−0.2	7.9	0.9	9.4
	S	10	2:08	8:18	14:14	20:32
			−0.6	8.1	0.6	9.8
	S	11	3:02	9:18	15:14	21:30
			−1.0	8.6	0.2	10.2
P ●	M	12	3:57	10:14	16:12	22:26
			−1.4	9.0	−0.3	10.5
	Tu	13	4:50	11:06	17:06	23:19
			−1.7	9.5	−0.7	10.7
	W	14	5:40	11:54	17:58	. . .
			−1.8	9.8	−1.0	. . .
E	Th	15	0:11	6:30	12:42	18:50
			10.6	−1.7	10.0	−1.1
	F	16	1:03	7:18	13:31	19:41
			10.3	−1.4	10.0	−1.0
	S	17	1:55	8:08	14:20	20:36
			9.9	−0.9	9.8	−0.7
	S	18	2:50	9:00	15:12	21:34
			9.2	−0.3	9.4	−0.3
☽	M	19	3:47	9:54	16:08	22:35
			8.5	0.4	9.0	0.1
	Tu	20	4:51	10:52	17:07	23:40
			7.9	0.9	8.7	0.5
	W	21	6:00	11:57	18:10	. . .
			7.4	1.3	8.5	. . .
S	Th	22	0:45	7:11	13:02	19:11
			0.6	7.3	1.5	8.5
	F	23	1:46	8:15	14:03	20:08
			0.6	7.4	1.4	8.5
	S	24	2:41	9:09	14:57	21:00
			0.5	7.5	1.3	8.6
A	S	25	3:28	9:58	15:42	21:44
			0.3	7.7	1.1	8.7
	M	26	4:08	10:30	16:22	22:23
			0.2	7.9	1.0	8.8
○	Tu	27	4:40	11:00	16:56	22:58
			0.0	8.1	0.8	8.8
	W	28	5:14	11:28	17:28	23:32
			−0.1	8.3	0.6	8.8
E	Th	29	5:45	11:56	18:00	. . .
			−0.1	8.6	0.4	. . .
	F	30	0:06	6:18	12:28	18:34
			8.8	−0.1	8.8	0.2
	S	31	0:40	6:50	13:01	19:10
			8.8	−0.1	9.0	0.0

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:18	7:24	13:37	19:50
			8.8	0.1	9.0	−0.1
	M	2	1:57	8:02	14:20	20:37
			8.6	0.3	9.0	−0.1
	Tu	3	2:44	8:48	15:06	21:29
			8.3	0.6	8.9	0.0
☾	W	4	3:36	9:37	16:01	22:29
			8.0	0.9	8.8	0.1
N	Th	5	4:38	10:37	17:01	23:35
			7.7	1.2	8.7	0.1
	F	6	5:46	11:44	18:07	. . .
			7.6	1.3	8.8	. . .
	S	7	0:42	6:58	12:56	19:15
			0.0	7.8	1.0	9.1
	S	8	1:46	8:04	14:03	20:18
			−0.3	8.2	0.6	9.6
P	M	9	2:46	9:02	15:03	21:18
			−0.8	8.8	−0.1	10.0
●	Tu	10	3:40	9:55	15:57	22:12
			−1.2	9.4	−0.7	10.4
E	W	11	4:30	10:44	16:50	23:04
			−1.5	9.9	−1.2	10.5
	Th	12	5:17	11:30	17:38	23:52
			−1.5	10.2	−1.4	10.4
	F	13	6:04	12:15	18:28	. . .
			−1.4	10.3	−1.4	. . .
	S	14	0:42	6:51	13:01	19:18
			10.1	−1.0	10.1	−1.2
	S	15	1:32	7:38	13:48	20:10
			9.5	−0.4	9.8	−0.8
	M	16	2:24	8:30	14:40	21:05
			8.8	0.2	9.3	−0.3
	Tu	17	3:20	9:22	15:34	22:05
			8.1	0.9	8.8	0.3
☽ S	W	18	4:24	10:22	16:34	23:09
			7.5	1.4	8.4	0.7
	Th	19	5:34	11:29	17:38	. . .
			7.2	1.7	8.1	. . .
	F	20	0:14	6:42	12:37	18:42
			0.8	7.1	1.8	8.1
A	S	21	1:14	7:43	13:38	19:40
			0.8	7.3	1.6	8.2
	S	22	2:07	8:32	14:29	20:31
			0.6	7.6	1.3	8.3
	M	23	2:58	9:12	15:11	21:15
			0.4	7.9	1.0	8.5
	Tu	24	3:30	9:46	15:48	21:53
			0.2	8.3	0.7	8.7
	W	25	4:04	10:17	16:21	22:28
			0.1	8.6	0.3	8.8
E ○	Th	26	4:36	10:47	16:54	23:02
			−0.1	8.9	0.0	9.0
	F	27	5:08	11:18	17:28	23:36
			−0.1	9.2	−0.3	9.0
	S	28	5:40	11:50	18:04	. . .
			−0.2	9.3	−0.6	. . .
	S	29	0:12	6:15	12:26	18:42
			9.0	−0.1	9.4	−0.7
	M	30	0:51	6:50	13:05	19:25
			8.9	0.1	9.4	−0.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	2:05 9.0	8:08 0.8	14:23 9.6	20:50 −0.1
	W	2	2:54 8.6	8:57 1.2	15:16 9.4	21:46 0.1
N ☾	Th	3	3:50 8.3	9:55 1.5	16:15 9.2	22:47 0.4
	F	4	4:50 8.0	11:00 1.6	17:18 9.0	23:50 0.5
	S	5	5:56 8.0	12:08 1.4	18:25 9.1	. . . . . .
	S	6	0:55 0.4	7:04 8.2	13:15 1.0	19:32 9.4
P	M	7	1:57 0.2	8:07 8.8	14:18 0.4	20:33 9.8
	Tu	8	2:53 −0.2	9:04 9.4	15:16 −0.3	21:31 10.1
E	W	9	3:46 −0.6	9:56 10.1	16:10 −0.9	22:23 10.4
●	Th	10	4:34 −0.8	10:44 10.5	17:00 −1.3	23:18 10.5
	F	11	5:21 −0.9	11:31 10.8	17:47 −1.5	. . . . . .
	S	12	0:00 10.3	6:06 −0.7	12:17 10.9	18:35 −1.4
	S	13	0:47 10.0	6:52 −0.4	13:02 10.7	19:23 −1.1
	M	14	1:33 9.5	7:37 0.1	13:49 10 3	20:11 −0.7
	Tu	15	2:21 9.0	8:26 0.6	14:38 9.8	21:00 −0.1
S	W	16	3 12 8.4	9:17 1.2	15:28 9.2	21:53 0.4
☽	Th	17	4:07 8.0	10:12 1.6	16:22 8.7	22:49 0.8
	F	18	5:04 7.6	11:10 1.9	17:18 8.4	23:46 1.1
A	S	19	6:08 7.5	12:10 2.0	18:15 8.2	. . . . . .
	S	20	0:42 1.1	6:58 7.6	13:05 1.9	19:10 8.3
	M	21	1.32 1.0	7:48 7.9	13:55 1.5	20:01 8.4
	Tu	22	2:19 0.8	8:31 8.4	14:40 1.1	20:47 8.7
E	W	23	3:01 0.6	9:11 8.9	15:22 0.5	21:30 9.0
	Th	24	3:42 0.4	9:50 9.3	16:03 0.0	22:11 9.3
○	F	25	4:20 0.2	10:28 9.8	16:43 −0.4	22:52 9.5
	S	26	4:57 0.1	11:07 10.1	17:25 −0.8	23:32 9.6
	S	27	5:36 0.1	11:47 10.3	18:08 −1.0	. . . . . .
	M	28	0:14 9.5	6:16 0.3	12:30 10.3	18:52 −1.0
	Tu	29	0:57 9.3	6:58 0.5	13:15 10.2	19:40 −0.8
N	W	30	1:44 9.1	7:47 0.8	14:05 9.9	20:32 −0.5
	Th	31	2:35 8.7	8:40 1.1	14:58 9.6	21:30 −0.2

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	3:35 8.4	9:40 1.3	15:58 9.3	22:30 0.2
	S	2	4:35 8.2	10:47 1.4	17:08 9.1	23:32 0.4
P	S	3	5:42 8.3	11:55 1.2	18:10 9.0	. . . . . .
	M	4	0:30 0.4	6:48 8.6	13:02 0.8	19:16 9.2
E	Tu	5	1:36 0.3	7:49 9.1	14:05 0.2	20:17 9.4
	W	6	2:32 0.0	8:44 9.7	15:02 −0.4	21:15 9.6
	Th	7	3:24 −0.2	9:35 10.2	15:54 −0.8	22:07 9.7
●	F	8	4:12 −0.3	10:22 10.6	16:43 −1.1	22:56 9.7
	S	9	4:48 −0.3	11:08 10.8	17:30 −1.2	23:42 9.5
	S	10	5:48 −0.2	11:54 10.7	18:15 −1.1	. . . . . .
	M	11	0:27 9.2	6:28 0.2	12:38 10.5	19:00 −0.8
S	Tu	12	1:10 8.9	7:12 0.5	13:24 10.1	19:46 −0.5
	W	13	1:55 8.5	7:58 1.0	14:09 9.6	20:32 −0.1
	Th	14	2:42 8.2	8:46 1.4	14:57 9.1	21:21 0.4
	F	15	3:32 7.9	9:37 1.8	15:46 8.6	22:11 0.7
▲ ☽	S	16	4:24 7.7	10:30 2.0	16:37 8.3	23:02 1.0
	S	17	5:17 7.7	11:21 2.0	17:30 8.1	23:53 1.1
	M	18	6:08 7.9	12:18 1.8	18:28 8.1	. . . . . .
E	Tu	19	0:43 1.1	6:57 8.2	13:09 1.4	19:15 8.2
	W	20	1:31 1.0	7:42 8.6	13:58 0.9	20:04 8.4
	Th	21	2:16 0.8	8:27 9.1	15:44 0.4	20:50 8.7
	F	22	3:00 0.6	9:10 9.6	15:29 −0.2	21:35 9.0
	S	23	3:48 0.4	9:53 10.1	16:15 −0.7	22:20 9.2
○	S	24	4:25 0.3	10:38 10.5	17:00 −1.1	23:04 9.4
	M	25	5:08 0.2	11:23 10.7	17:47 −1.3	23:50 9.4
N	Tu	26	5:53 0.2	12:10 10.7	18:36 −1.3	. . . . . .
	W	27	0:37 9.3	6:42 0.4	12:58 10.6	19:26 −1.2
P	Th	28	1:28 9.2	7:32 0.5	13:50 10.3	20:17 −0.9
	F	29	2:22 9.0	8:28 0.7	14:45 9.9	21:13 −0.5
	S	30	3:19 8.8	9:28 0.9	15:45 9.6	22:11 −0.1

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	4:22 8.8	10:33 0.9	16:47 9.2	23:12 0.1
E	M	2	5:25 8.8	11:40 0.8	17:52 9.0	. . . . . .
	Tu	3	0:12 0.3	6:27 9.1	12:45 0.5	18:57 8.9
	W	4	1:11 0.4	7:25 9.4	13:47 0.2	20:00 8.9
	Th	5	2:08 0.3	8:20 9.8	14:45 −0.1	20:58 8.9
	F	6	3:01 0.2	9:13 10.2	15:38 −0.4	21:52 8.9
	S	7	3:51 0.2	10:02 10.4	16:27 −0.6	22:41 8.9
●	S	8	4:38 0.3	10:49 10.5	17:13 −0.6	23:26 8.8
S	M	9	5:23 0.4	11:33 10.4	17:57 −0.6	. . . . . .
	Tu	10	0:10 8.6	6:07 0.6	12:18 10.2	18:40 −0.4
	W	11	0:51 8.5	6:50 0.9	13:00 9.9	19:22 −0.3
	Th	12	1:32 8.4	7:32 1.2	13:42 9.5	20:05 0.0
	F	13	2:15 8.3	8:16 1.4	14:25 9.1	20:49 0.2
A	S	14	2:57 8.1	9:01 1.6	15:09 8.7	21:32 0.5
	S	15	3:43 8.1	9:48 1.8	15:55 8.4	22:18 0.8
☽	M	16	4:28 8.2	10:38 1.8	16:43 8.1	23:04 1.0
E	Tu	17	5:16 8.3	11:29 1.6	17:33 8.0	23:52 1.1
	W	18	6:05 8.5	11:22 1.3	18:25 8.0	. . . . . .
	Th	19	0:41 1.1	6:55 8.8	13:14 0.8	19:16 8.2
	F	20	1:30 1.0	7:45 9.3	14:07 0.3	20:10 8.4
	S	21	2:19 0.9	8:35 9.7	14:58 −0.2	21:00 8.6
	S	22	3:08 0.7	9:24 10.2	15:49 −0.7	21:51 8.9
N ○	M	23	3:57 0.4	10:13 10.6	16:39 −1.1	22:41 9.2
	Tu	24	4:47 0.2	11:08 10.9	17:28 −1.4	23:32 9.3
	W	25	5:37 0.1	11:54 11.0	18:20 −1.5	. . . . . .
P	Th	26	0:23 9.5	6:28 0.0	12:45 11.0	19:10 −1.4
	F	27	1:05 9.5	7:20 0.0	13:38 10.7	20:02 −1.2
	S	28	2:07 9.5	8:16 0.0	14:32 10.4	20:54 −0.9
	S	29	3:02 9.5	9:15 0.2	15:28 9.9	21:49 −0.5
E ☾	M	30	4:02 9.4	10:15 0.3	16:27 9.4	22:47 −0.1
	Tu	31	5:00 9.4	11:18 0.4	17:28 9.0	23:45 0.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2 2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:45 0.7	8:00 10.0	14:25 −0.4	20:30 8.8
	Tu	2	2:37 0.5	8:54 10.4	15:22 −0.8	21:27 8.9
N	W	3	3:32 0.3	9:50 10.8	16:17 −1.2	22:21 9.2
○ P	Th	4	4:26 0.0	10:44 11.1	17:10 −1.5	23:15 9.4
	F	5	5:20 −0.2	11:37 11.3	18:02 −1.7	. . . . .
	S	6	0:10 9.6	6:14 −0.4	12:30 11.3	18:54 −1.6
	S	7	1:02 9.7	7:08 −0.5	13:28 11.0	19:45 −1.5
	M	8	1:55 9.8	8:08 −0.4	14:17 10.6	20:37 −1.1
E	Tu	9	2:50 9.8	9:00 −0.2	15:12 10.1	21:31 −0.7
	W	10	3:45 9.7	9:57 0.0	16:09 9.6	22:25 −0.2
☾	Th	11	4:40 9.5	10:58 0.3	17:08 9.0	23:20 0.3
	F	12	5:37 9.4	11:58 0.6	18:09 8.5	. . . . .
	S	13	0:18 0.7	6:34 9.3	13:00 0.7	19:12 8.1
	S	14	1:15 1.0	7:30 9.2	13:58 0.7	20:13 7.9
	M	15	2:09 1.2	8:22 9.3	14:52 0.7	21:09 7.8
	Tu	16	3:01 1.3	9:12 9.4	15:40 0.6	21:59 7.8
S A	W	17	3:52 1.3	9:57 9.4	16:28 0.4	22:40 7.8
	Th	18	4:30 1.3	10:38 9.5	17:08 0.2	23:18 7.9
●	F	19	5:10 1.3	11:18 9.5	17:40 0.1	23:52 8.1
	S	20	5:47 1.2	11:56 9.5	18:17 0.0	. . . . .
	S	21	0:20 8.3	6:23 1.1	12:33 9.5	18:54 −0.1
	M	22	1:00 8.6	7:00 1.0	13:10 9.4	19:31 −0.1
	Tu	23	1:35 8.7	7:40 0.9	13:50 9.3	20:10 0.1
E	W	24	2:16 8.9	8:22 0.8	14:32 9.1	20:50 0.3
	Th	25	2:59 9.0	9:10 0.7	15:17 8.9	21:35 0.6
	F	26	3:45 9.0	10:01 0.7	16:07 8.6	22:22 0.9
☽	S	27	4:36 9.1	10:58 0.6	17:00 8.3	23:14 1.1
	S	28	5:32 9.2	11:58 0.5	18:00 8.2	. . . . .
	M	29	0:12 1.2	6:32 9.4	13:01 0.2	19:04 8.1
	Tu	30	1:12 1.1	7:33 9.7	14:08 0.0	20:08 8.3
N	W	31	2:15 0.9	8:34 10.1	15:04 −0.4	21:11 8.6

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	3:15 0.5	9:33 10.5	16:00 −0.8	22:10 9.0
○	F	2	4:13 0.0	10:30 10.9	16:55 −1.2	23:04 9.5
	S	3	5:08 −0.4	11:24 11.2	17:46 −1.5	23:56 9.9
	S	4	6:01 −0.8	12:16 11.2	18:35 −1.5	. . . . .
	M	5	0:46 10.2	6:58 −0.9	13:07 11.1	19:24 −1.5
E	Tu	6	1:35 10.3	7:44 −0.9	13:58 10.7	20:12 −1.1
	W	7	2:24 10.2	8:35 −0.7	14:49 10.1	21:01 −0.7
	Th	8	3:14 10.0	9:30 −0.3	15:40 9.5	21:52 −0.1
☾	F	9	4:06 9.7	10:25 0.2	16:35 8.8	22:45 0.5
	S	10	5:00 9.4	11:22 0.6	17:38 8.1	23:42 1.1
	S	11	5:55 9.1	12:22 0.9	18:35 7.7	. . . . .
	M	12	0:38 1.4	6:52 8.9	13:22 1.1	19:38 7.4
S	Tu	13	1:36 1.7	7:48 8.8	14:18 1.1	20:38 7.4
A	W	14	2:30 1.7	8:40 8.9	15:08 0.9	21:28 7.5
	Th	15	3:19 1.6	9:28 9.0	15:53 0.7	22:10 7.7
	F	16	4:08 1.4	10:10 9.2	16:33 0.4	22:47 8.1
	S	17	4:42 1.2	10:51 9.4	17:11 0.1	23:20 8.4
●	S	18	5:20 0.9	11:30 9.6	17:47 −0.1	23:54 8.8
	M	19	5:57 0.6	12:08 9.7	18:23 −0.2	. . . . .
E	Tu	20	0:29 9.1	6:36 0.3	12:45 9.7	19:00 −0.2
	W	21	1:06 9.3	7:15 0.1	13:25 9.6	19:37 −0.1
	Th	22	1:45 9.5	7:57 0.0	14:06 9.4	20:18 0.2
	F	23	2:28 9.5	8:45 0 1	14:51 9.0	21:01 0.6
	S	24	3:15 9.4	9:36 0.2	15:40 8.7	21:48 1.0
☽	S	25	4:07 9.3	10:33 0.3	16:35 8.3	22:45 1.3
	M	26	5:05 9.2	11:35 0.4	17:37 8.0	23:47 1.5
N	Tu	27	6:08 9.3	12:40 0.4	18:40 . 7 9	. . . . .
	W	28	0:58 1.3	7:13 9.4	13:45 0.3	19:50 8.0
	Th	29	2:00 1.0	8:18 9.8	14:47 0.0	20:57 8.5

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	3:08 0.5	9:20 10.2	15:44 −0.5	21:55 9.1
	S	2	4:02 −0.1	9:17 10.6	16:37 −1.1	22:48 9.7
○	S	3	4:55 −0.7	11:10 10.9	17:27 −1.3	23:37 10.2
E	M	4	5:46 −1.0	12:00 11.0	18:14 −1.3	. . . . .
	Tu	5	0:24 10.5	6:35 −1.2	12:48 10.8	18:59 −1.2
	W	6	1:10 10.6	7:22 −1.2	13:35 10.4	19:45 −0.8
	Th	7	1:56 10.4	8:10 −0.8	14:22 9.8	20:30 −0.3
	F	8	2:42 10.1	9:00 −0.4	15:11 9.2	21:18 0.3
	S	9	3:32 9.7	9:52 0.1	16:02 8.5	22:08 1.0
☾	S	10	4:22 9.2	10:47 0.7	16:57 7.9	23:08 1.5
S	M	11	5:17 8.8	11:48 1.0	17:55 7.4	. . . . .
A	Tu	12	0:00 1.9	6:13 8.5	12:41 1.3	18:57 7.2
	W	13	0:59 2.0	7:10 8.4	13:38 1.3	19:56 7.3
	Th	14	1:55 2.0	8:08 8.5	14:30 1.1	20:47 7.5
	F	15	2:45 1.7	8:52 8.7	15:15 0.8	21:30 7.9
	S	16	3:30 1.3	9:38 9.0	15:57 0.5	22:07 8.4
	S	17	4:10 0.8	10:20 9.3	16:37 0.1	22:45 8.9
●	M	18	4:50 0.4	11:00 9.6	17.14 −0.1	23:21 9.3
E	Tu	19	5:30 0.0	11:40 9.8	17:50 −0.2	23:48 9.7
	W	20	6:10 −0.4	12:20 9.8	18:29 −0.2	. . . . .
	Th	21	0:37 9.9	6:52 −0.6	13:00 9.8	19:08 0.0
	F	22	1:17 10.0	7:36 −0.6	13:43 9.5	19:50 0.3
	S	23	2:02 9.9	8:23 −0.5	14:30 9.2	20:35 0.7
	S	24	2:52 9.7	9:17 −0 2	15:23 8.7	21:27 1.1
N ☽	M	25	3:46 9.5	10:15 0.1	16:18 8.3	22:26 1.4
	Tu	26	4:45 9.2	11:17 0.3	17:22 8.0	23:32 1.5
	W	27	5:51 9.1	12:22 0.5	18:31 7.9	. . . . .
P	Th	28	0:41 1.3	6:59 9.2	13:28 0.4	19:39 8.2
	F	29	1:49 0.9	8:05 9.5	14:30 0.1	20:42 8.8
	S	30	2:52 0.3	9:06 9.9	15:26 −0.2	21:37 9.4
	S	31	3:47 −0.3	10:02 10.2	16:17 −0.6	22:28 10.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3.47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	4:40	10:53	17:04	23:14
○			−0.8	10.4	−0.8	10.4
	Tu	2	5:28	11:42	17:49	23:59
			−1.1	10.4	−0.8	10.6
•	W	3	6:14	12:27	18:33	. . .
			−1.2	10.2	−0.6	. . .
	Th	4	0:48	7:00	13:12	19:16
			10.6	−1.1	9.8	−0.2
	F	5	1:27	7:45	13:56	20:00
			10.3	−0.8	9.3	0.3
	S	6	2:12	8:32	14:42	20:45
			10.0	−0.4	8.8	0.8
	S	7	2:57	9:20	15:30	21:34
			9.5	0.2	8.2	1.4
S	M	8	3:44	10:11	16:22	22:26
			9.0	0.6	7.8	1.8
☾	Tu	9	4:37	11:04	17:16	23:20
A			8.5	1.0	7.5	2.1
	W	10	5:30	11:58	18:12	. . .
			8.2	1.2	7.4	. . .
	Th	11	0:18	6:27	12:53	19:07
			2.1	8.2	1.2	7.5
	F	12	1:12	7:21	13:43	19:57
			1.9	8.3	1.1	7.8
	S	13	2:03	8:12	14:32	20:42
			1.6	8.5	0.8	8.3
	S	14	2:50	9:00	15:15	21:25
			1.0	8.9	0.5	8.9
E	M	15	3:36	9:45	15:57	22:05
			0.5	9.2	0.2	9.4
	Tu	16	4:18	10:28	16:37	22:45
			−0.1	9.5	0.0	9.9
•	W	17	5:02	11:10	17:18	23:27
			−0.6	9.8	−0.1	10.2
	Th	18	5:45	11:53	17:58	. . .
			−1.0	9.8	−0 1	. . .
	F	19	0:10	6:30	12:38	18:42
			10.4	−1.1	9.7	0.1
	S	20	0:53	7:17	13:23	19:27
			10.4	−1.1	9.5	0.4
	S	21	1:42	8:07	14:10	20:16
			10.3	−0.9	9.1	0.7
N	M	22	2:34	9:02	15:05	21:11
P			10.0	−0.5	8.7	1.0
	Tu	23	3:30	10:00	16:05	22:13
			9.6	−0.2	8.4	1.2
☽	W	24	4:32	11:02	17:11	23:21
			9.3	0.2	8.2	1.3
	Th	25	5:38	12:06	18:18	. . .
			9.1	0.4	8.3	. . .
	F	26	0:30	6:45	13:09	19:23
			1.1	9.1	0.3	8.6
	S	27	1:36	7:50	14:08	20:22
			0.7	9.3	0.2	9.2
E	S	28	2:37	8:50	15:04	21:15
			0.1	9.5	0.0	9.7
	M	29	3:32	9:45	15:53	22:05
			−0.4	9.6	−0.2	10.1
	Tu	30	4:22	10:35	16:50	22:50
			−0.7	9.7	−0.2	10.4

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	5:09	11:22	17:23	23:34
			−0.9	9.6	−0.1	10.5
	Th	2	5:54	12:07	18:07	. . .
			−0.9	9.4	0.1	. . .
	F	3	0:17	6:37	12:50	18:49
			10.4	−0.8	9.1	0.5
	S	4	1:00	7:22	13:31	19:31
			10.1	−0.5	8.7	0.8
S	S	5	1:42	8:05	14:14	20:15
			9.7	−0.2	8.4	1.3
	M	6	2:26	8:50	15:00	21:01
			9.2	0.2	8.0	1.7
A	Tu	7	3:11	9:37	15:47	21:50
			8.8	0.6	8.2	2.0
	W	8	4:00	8:25	16:38	22:40
			8.4	0.8	7.6	2.1
☾	Th	9	4:50	11:17	17:28	23:35
			8.2	1.0	7.7	2.0
	F	10	5:42	12:07	18:20	. . .
			8.1	1.1	7.9	. . .
	S	11	0:28	6:35	12:57	19:08
			1.8	8.2	1.0	8.3
E	S	12	1:21	7:27	13:45	19:55
			1.3	8.4	0.8	8.8
	M	13	2:11	8:18	14:32	20:42
			0.7	8.7	0.6	9.3
	Tu	14	3:00	9:07	15:17	21:28
			0.1	9.0	0.4	9.8
	W	15	3:47	9:55	16:02	22:13
			−0.5	9.3	0.2	10.3
•	Th	16	4:35	10:42	16:45	22:59
			−1.0	9.5	0.1	10.6
	F	17	5:22	11:30	17:32	23:47
			−1.3	9.6	0.1	10.8
	S	18	6:11	12:18	18:19	. . .
			−1.4	9.6	0.2	. . .
N	S	19	0:35	7:00	13:05	19:08
P			10.7	−1.4	9.4	0.3
	M	20	1:26	7:58	13:58	20:03
			10.6	−1.1	9.2	0.5
	Tu	21	2:20	8:47	14:54	21:01
			10.2	−0.8	8.9	0.8
	W	22	3:17	9:45	15:55	22:03
			9.9	−0.4	8.7	0.9
☽	Th	23	4:18	10:45	16:58	23:10
			9.5	−0.1	8.7	0.8
	F	24	5:22	11:47	18:00	. . .
			9.2	0.1	8.9	. . .
E	S	25	0:15	6:27	12:45	19:01
			0.7	9.1	0.2	9.1
	S	26	1:19	7:31	13:43	19:58
			0.5	9.0	0.3	9.5
	M	27	2:18	8:30	14:38	20:50
			0.1	9.0	0.3	9.8
	Tu	28	3:13	9:27	15:28	21:40
			−0.2	8.9	0.3	10.1
	W	29	4:03	10:17	16:15	22:25
			−0.4	8.9	0.3	10.2
○	Th	30	4:50	11:03	17:00	23:10
			−0.5	8.8	0.5	10.2
	F	31	5:33	11:47	17:43	23:53
			−0.5	8.6	0.7	10.0

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	6:16	12:28	18:24	. . .
			−0.4	8.4	1.0	. . .
	S	2	0:35	6:57	13:08	19:05
			9.8	−0.2	8.2	1.3
	M	3	1:15	7:39	13:48	19:47
			9.5	0.0	8.1	1.5
A	Tu	4	1:56	8:20	14:28	20:28
			9.1	0.2	8.0	1.7
	W	5	2:38	9:08	15:13	21:15
			8.8	0.4	7.9	1.8
	Th	6	3:23	9:47	15:57	22:02
			8.5	0.7	8.0	1.9
☾	F	7	:10	10:33	16:45	22:52
			8.3	0.9	8.1	1.7
	S	8	4:59	11:22	17:33	23:46
			8.2	1.0	8.4	1.4
E	S	9	5:50	12:10	18:22	. . .
			8.2	1.0	8.7	. . .
	M	10	0:39	6:43	13:00	19:13
			1.0	8.4	0.9	9.1
	Tu	11	1:32	7:37	13:48	20:03
			0.5	8.6	0.7	9.6
	W	12	2:27	8:30	14:38	20:53
			−0.1	8.8	0.6	10.1
	Th	13	3:18	9:23	15:28	21:44
			−0.6	9.0	0.4	10.5
	F	14	4:10	10:13	16:18	22:35
			−1.1	9.2	0.2	10.8
•	S	15	5:01	11:05	17:11	23:27
N			−1.4	9.3	0.1	11.0
P	S	16	5:53	11:58	18:01	. . .
			−1.5	9.4	0.1	. . .
	M	17	0:18	6:45	12:50	18:55
			11.1	−1.5	9.4	0.1
	Tu	18	1:12	7:37	13:45	19:50
			10.8	−1.3	9.4	0.1
	W	19	2:06	8:31	14:40	20:48
			10.5	−1.1	9.3	0.2
	Th	20	3:04	9:26	15:39	21:49
			10.2	−0.7	9.3	0.3
☽	F	21	4:03	10:23	16:38	22:50
E			9.7	−0.4	9.3	0.4
	S	22	5:03	11:20	17:36	23:54
			9.3	0.0	9.4	0.4
	S	23	6:05	12:18	18:34	. . .
			9.0	0.3	9.5	. . .
	M	24	0:56	7:08	13:15	19:30
			0.4	8.7	0.5	9.6
	Tu	25	1:57	8:08	14:10	20:23
			0.3	8.5	0.6	9.7
	W	26	2:50	9:06	15:03	21:15
			0.2	8.3	0.7	9.8
	Th	27	3:42	9:58	15:52	22:12
			0.1	8.2	0.8	9.9
S	F	28	4:30	10:46	16:37	22:47
			0.0	8.2	0.9	9.8
○	S	29	5:13	11:28	17:20	23:30
			0.0	8.1	1.1	9.7
	S	30	5:58	12:07	18:00	. . .
			0.0	8.1	1.2	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee,

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	0:11	6:35	12:45	18:44
			9.6	0.0	8.1	1.3
	Tu	2	0:51	7:13	13:22	19:22
			9.4	0.1	8.1	1.4
	W	3	1:30	7:52	13:58	20:02
			9.2	0.2	8.2	1.5
	Th	4	2:10	8:32	14:40	20:45
			8.9	0.4	8.3	1.5
	F	5	2:52	9:15	15:23	21:30
			8.7	0.6	8.4	1.4
E	S	6	3:36	9:57	16:07	22:18
			8.5	0.7	8.5	1.3
☾	S	7	4:22	10:48	16:54	23:10
			8.4	0.9	8.7	1.1
	M	8	5:13	11:30	17:44	. . .
			8.3	1.0	8.9	. . .
	Tu	9	0:05	6:07	12:22	18:37
			0.8	8.2	1.1	9.3
	W	10	1:02	7:05	13:15	19:32
			0.4	8.3	1.0	9.6
	Th	11	1:58	8:01	14:10	20:28
			0.0	8.5	0.8	10.1
	F	12	2:55	8:57	15:06	21:23
			−0.5	8.7	0.6	10.5
N	S	13	3:51	9:54	16:02	22:18
			−0.9	8.9	0.3	10.9
● P	S	14	4:45	10:49	16:56	23:12
			−1.1	9.2	0.0	11.1
	M	15	5:37	11:42	17:50	. . .
			−1.5	9.5	−0.2	. . .
	Tu	16	0:07	6:30	12:36	18:45
			11.2	−1.5	9.7	−0.4
	W	17	1:00	7:21	13:30	19:38
			11.1	−1.5	9.9	−0.5
	Th	18	1:53	8:13	14:24	20:35
			10.8	−1.3	10.0	−0.4
E	F	19	2:47	9:05	15:18	21:31
			10.9	−0.9	9.9	−0.2
	S	20	3:43	10:00	16:13	22:30
			9.9	−0.5	9.8	0.0
☽	S	21	4:40	10:55	17:08	23:30
			9.3	0.0	9.7	0.2
	M	22	5:40	11:52	18:05	. . .
			8.8	0.4	9.6	. . .
	Tu	23	0:31	6:42	12:48	19:03
			0.4	8.3	0.8	9.5
	W	24	1:31	7:45	13:45	19:58
			0.5	8.0	1.0	9.5
	Th	25	2:28	8:45	14:40	20:50
			0.6	7.9	1.1	9.5
S	F	26	3:20	9:38	15:32	21:40
			0.6	7.9	1.1	9.5
	S	27	4:07	10:25	16:17	22:17
			0.4	7.9	1.1	9.5
○ A	S	28	4:50	11:05	17:00	23:07
			0.3	8.0	1.1	9.5
	M	29	5:29	11:42	17:40	23:46
			0.2	8.1	1.1	9.5
	Tu	30	6:07	12:17	18:17	. . .
			0.1	8.3	1.1	. . .
	W	31	0:24	6:43	12:51	18:58
			9.4	0.0	8.5	1.0

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	1:02	7:20	13:27	19:32
			9.3	0.1	8.7	1.0
E	F	2	1:40	7:58	14:04	20:11
			9.1	0.3	8.8	0.9
	S	3	2:18	8:36	14:44	20:55
			8.9	0.5	8.8	0.8
	S	4	3:01	9:18	15:27	21:43
			8.7	0.7	8.9	0.8
☾	M	5	3:47	10:00	16:15	22:37
			8.5	1.0	9.0	0.7
	Tu	6	4:38	10:50	17:08	23:33
			8.3	1.2	9.1	0.6
	W	7	5:35	11:46	18:05	. . .
			8.1	1.2	9.2	. . .
	Th	8	0:33	6:36	12:46	19:05
			0.4	8.1	1.3	9.5
N	F	9	1:35	7:35	13:47	20:05
			0.1	8.2	1.1	9.9
	S	10	2:35	8:37	14:47	21:05
			−0.2	8.5	0.6	10.3
	S	11	3:32	9:37	15:46	22:02
			−0.6	8.9	0.1	10.8
P ●	M	12	4:27	10:33	16:42	22:57
			−1.0	9.4	−0.4	11.0
	Tu	13	5:18	11:26	17:35	23:50
			−1.3	9.8	−0.8	11.2
	W	14	6:09	12:18	18:28	. . .
			−1.5	10.2	−1.0	. . .
E	Th	15	0:42	6:58	13:08	19:20
			11.1	−1.5	10.4	−1.0
	F	16	1:33	7:48	13:58	20:12
			10.8	−1.2	10.4	−0.9
	S	17	2:25	8:38	14:50	21:06
			10.3	−0.8	10.3	−0.6
	S	18	3:18	9:29	15:42	22:02
			9.7	−0.3	10.0	−0.2
☽	M	19	4:13	10:23	16:37	23:00
			9.0	0.3	9.7	0.2
	Tu	20	5:12	11:20	17:34	. . .
			8.4	0.8	9.3	. . .
	W	21	0:00	6:14	12:20	18:32
			0.6	8.0	1.2	9.2
S	Th	22	1:01	7:18	13:18	19:30
			0.8	7.7	1.4	9.0
	F	23	2:00	8:18	14:15	20:24
			0.9	7.7	1.4	9.1
	S	24	2:58	9:12	15:07	21:13
			0.8	7.7	1.3	9.2
A	S	25	3:40	9:57	15:57	21:58
			0.6	8.0	1.3	9.3
	M	26	4:21	10:35	16:33	22:40
			0.4	8.2	1.0	9.4
○	Tu	27	5:00	11:10	17:12	23:18
			0.2	8.5	0.8	9.5
	W	28	5:35	11:42	17:47	23:56
			0.0	8.8	0.6	9.5
E	Th	29	6:10	12:17	18:23	. . .
			0.0	9.0	0.4	. . .
	F	30	0:32	6:45	12:52	19:02
			9.5	0.1	9.2	0.3
	S	31	1:10	7:22	13:29	19:42
			9.3	0.3	9.3	0.2

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:48	8:00	14:08	20:25
			9.2	0.5	9.3	0.3
	M	2	2:31	8:40	14:58	21:13
			8.9	0.8	9.3	0.3
	Tu	3	3:18	9:26	15:42	22:10
			8.5	1.2	9.2	0.5
☾	W	4	4:10	10:18	16:38	23:10
			8.3	1.5	9.1	0.5
N	Th	5	5:12	11:20	17:40	. . .
			8.0	1.6	9.1	. . .
	F	6	0:12	6:15	12:25	18:45
			0.5	7.9	1.5	9.3
	S	7	1:15	7:22	13:32	19:48
			0.3	8.1	1.1	9.7
	S	8	2:17	8:28	14:34	20:50
			0.0	8.5	0.5	10.1
P	M	9	3:15	9:22	15:33	21:48
			−0.4	9.1	−0.1	10.5
●	Tu	10	4:08	10:17	16:27	22:42
			−0.8	9.7	−0.7	10.9
E	W	11	4:48	11:07	17:20	23:33
			−1.2	10.3	−1.2	11.0
	Th	12	5:47	11:57	18:10	. . .
			−1.3	10.7	−1.4	. . .
	F	13	0:22	6:34	12:43	18:58
			10.9	−1.2	10.8	−1.4
	S	14	1:12	7:21	13:32	19:48
			10.6	−0.9	10.7	−1.2
	S	15	2:00	8:09	14:20	20:40
			10.1	−0.4	10.4	−0.8
	M	16	2:50	8:58	15:10	21:33
			9.4	0.1	10.0	−0.2
	Tu	17	3:44	9:52	16:04	22:28
			8.7	0.7	9.5	0.3
☽ S	W	18	4:41	10:48	17:00	23:28
			8.2	1.3	9.0	0.7
	Th	19	5:42	11:48	17:59	. . .
			7.7	1.6	8.7	. . .
	F	20	0:27	6:45	12:48	18:57
			1.0	7.5	1.7	8.6
A	S	21	1:25	7:45	13:45	19:52
			1.0	7.6	1.7	8.7
	S	22	2:17	8:36	14:37	20:42
			0.9	7.8	1.4	8.8
	M	23	3:04	9:18	15:22	21:27
			0.7	8.2	1.1	9.0
	Tu	24	3:45	9:57	16:02	22:08
			0.5	8.5	0.8	9.2
	W	25	4:23	10:32	16:40	22:47
			0.2	9.0	0.4	9.4
E ○	Th	26	5:00	11:07	17:17	23:25
			0.1	9.3	0.1	9.5
	F	27	5:35	11:42	17:55	. . .
			0.0	9.6	−0.2	. . .
	S	28	0:08	6:12	12:19	18:35
			9.6	0.1	9.8	−0.4
	S	29	0:42	6:48	12:57	19:07
			9.5	0.3	9.8	−0.4
	M	30	1:23	7:27	13:40	20:08
			9.3	0.6	9.7	−0.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	2:05 9.0	8:08 0.8	14:23 9.6	20:50 −0.1
	W	2	2:54 8.6	8:57 1.2	15:16 9.4	21:46 0.1
N ☾	Th	3	3:50 8.3	9:55 1.5	16:15 9.2	22:47 0.4
	F	4	4:50 8.0	11:00 1.6	17:18 9.0	23:50 0.5
	S	5	5:56 8.0	12:08 1.4	18:25 9.1	. . . . .
	S	6	0:55 0.4	7:04 8.2	13:15 1.0	19:32 9.4
P	M	7	1:57 0.2	8:07 8.8	14:18 0.4	20:33 9.8
	Tu	8	2:53 −0.2	9:04 9.4	15:16 −0.3	21:31 10.1
E	W	9	3:46 −0.6	9:56 10.1	16:10 −0.9	22:23 10.4
●	Th	10	4:34 −0.8	10:44 10.5	17:00 −1.3	23:13 10.5
	F	11	5:21 −0.9	11:31 10.8	17:47 −1.5	. . . . .
	S	12	0:00 10.3	6:06 −0.7	12:17 10.9	18:35 −1.4
	S	13	0:47 10.0	6:52 −0.4	13:02 10.7	19:23 −1.1
	M	14	1:33 9.5	7:37 0.1	13:49 10 3	20:11 −0.7
	Tu	15	2:21 9.0	8:26 0.6	14:38 9.8	21:00 −0.1
S	W	16	3 12 8.4	9:17 1.2	15:28 9.2	21:58 0.4
☽	Th	17	4:07 8.0	10:12 1.6	16:22 8.7	22:49 0.8
	F	18	5:04 7.6	11:10 1.9	17:18 8.4	23:46 1.1
A	S	19	6:08 7.5	12:10 2.0	18:15 8.2	. . . . .
	S	20	0:42 1.1	6:58 7.6	13:05 1.9	19:10 8.3
	M	21	1.32 1.0	7:48 7.9	13:55 1.5	20:01 8.4
	Tu	22	2:19 0.8	8:31 8.4	14:40 1.1	20:47 8.7
E	W	23	3:01 0.6	9:11 8.9	15:22 0.5	21:30 9.0
	Th	24	3:42 0.4	9:50 9.3	16:03 0.0	22:11 9.3
○	F	25	4:20 0.2	10:28 9.8	16:43 −0.4	22:52 9.5
	S	26	4:57 0.1	11:07 10.1	17:25 −0.8	23:32 9.6
	S	27	5:36 0.1	11:47 10.3	18:08 −1.0	. . . . .
	M	28	0:14 9.5	6:16 0.3	12:30 10.3	18:52 −1.0
	Tu	29	0:57 9.3	6:58 0.5	13:15 10.2	19:40 −0.8
N	W	30	1:44 9.1	7:47 0.8	14:05 9.9	20:32 −0.5
	Th	31	2:35 8.7	8:40 1.1	14:58 9.6	21:30 −0.2

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	3:35 8.4	9:40 1.3	15:58 9.3	22:30 0.2
	S	2	4:35 8.2	10:47 1.4	17:08 9.1	23:32 0.4
P	S	3	5:42 8.3	11:55 1.2	18:10 9.0	. . . . .
	M	4	0:30 0.4	6:48 8.6	13:02 0.8	19:16 9.2
E	Tu	5	1:36 0.3	7:49 9.1	14:05 0.2	20:17 9.4
	W	6	2:32 0.0	8:44 9.7	15:02 −0.4	21:15 9.6
	Th	7	3:24 −0.2	9:35 10.2	15:54 −0.8	22:07 9.7
●	F	8	4:12 −0.3	10:22 10.6	16:43 −1.1	22:56 9.7
	S	9	4:48 −0.3	11:08 10.8	17:30 −1.2	23:42 9.5
	S	10	5:43 −0.2	11:54 10.7	18:15 −1.1	. . . . .
	M	11	0:27 9.2	6:28 0.2	12:38 10.5	19:00 −0.8
S	Tu	12	1:10 8.9	7:12 0.5	13:24 10.1	19:46 −0.5
	W	13	1:55 8.5	7:58 1.0	14:09 9.6	20:32 −0.1
	Th	14	2:42 8.2	8:46 1.4	14:57 9.1	21:21 0.4
	F	15	3:32 7.9	9:37 1.8	15:46 8.6	22:11 0.7
▲ ☽	S	16	4:24 7.7	10:30 2.0	16:37 8.3	23:02 1.0
	S	17	5:17 7.7	11:21 2.0	17:30 8.1	23:58 1.1
	M	18	6:08 7.9	12:18 1.8	18:28 8.1	. . . . .
E	Tu	19	0:48 1.1	6:57 8.2	13:09 1.4	19:15 8.2
	W	20	1:31 1.0	7:42 8.6	13:58 0.9	20:04 8.4
	Th	21	2:16 0.8	8:27 9.1	15:44 0.4	20:50 8.7
	F	22	3:00 0.6	9:10 9.6	15:29 −0.2	21:35 9.0
	S	23	3:43 0.4	9:53 10.1	16:15 −0.7	22:20 9.2
○	S	24	4:25 0.3	10:38 10.5	17:00 −1.1	23:04 9.4
	M	25	5:08 0.2	11:23 10.7	17:47 −1.3	23:50 9.4
N	Tu	26	5:53 0.2	12:10 10.7	18:36 −1.3	. . . . .
	W	27	0:37 9.3	6:42 0.4	12:58 10.6	19:26 −1.2
P	Th	28	1:28 9.2	7:32 0.5	13:50 10.3	20:17 −0.9
	F	29	2:22 9.0	8:28 0.7	14:45 9.9	21:13 −0.5
	S	30	3:18 8.8	9:28 0.9	15:45 9.6	22:11 −0.1

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	4:22 8.8	10:33 0.9	16:47 9.2	23:12 0.1
E	M	2	5:25 8.8	11:40 0.8	17:52 9.0	. . . . .
	Tu	3	0:12 0.3	6:27 9.1	12:45 0.5	18:57 8.9
	W	4	1:11 0.4	7:25 9.4	13:47 0.2	20:00 8.9
	Th	5	2:08 0.3	8:20 9.8	14:45 −0.1	20:58 8.9
	F	6	3:01 0.2	9:13 10.2	15:38 −0.4	21:52 8.9
	S	7	3:51 0.2	10:02 10.4	16:27 −0.6	22:41 8.9
●	S	8	4:38 0.3	10:49 10.5	17:13 −0.6	23:26 8.8
S	M	9	5:23 0.4	11:33 10.4	17:57 −0.6	. . . . .
	Tu	10	0:10 8.6	6:07 0.6	12:18 10.2	18:40 −0.4
	W	11	0:51 8.5	6:50 0.9	13:00 9.9	19:22 −0.3
	Th	12	1:32 8.4	7:32 1.2	13:42 9.5	20:05 0.0
	F	13	2:15 8.3	8:16 1.4	14:25 9.1	20:49 0.2
A	S	14	2:57 8.1	9:01 1.6	15:09 8.7	21:32 0.5
	S	15	3:43 8.1	9:48 1.8	15:55 8.4	22:18 0.8
☽	M	16	4:28 8.2	10:38 1.8	16:43 8.1	23:04 1.0
E	Tu	17	5:16 8.3	11:29 1.6	17:38 8.0	23:52 1.1
	W	18	6:06 8.5	11:22 1.3	18:25 8.0	. . . . .
	Th	19	0:41 1.1	6:55 8.8	13:14 0.8	19:16 8.2
	F	20	1:30 1.0	7:45 9.3	14:07 0.3	20:10 8.4
	S	21	2:19 0.9	8:35 9.7	14:58 −0.2	21:00 8.6
	S	22	3:08 0.7	9:24 10.2	15:49 −0.7	21:51 8.9
N ○	M	23	3:57 0.4	10:13 10.6	16:39 −1.1	22:41 9.2
	Tu	24	4:47 0.2	11:03 10.9	17:28 −1.4	23:32 9.3
	W	25	5:37 0.1	11:54 11.0	18:20 −1.5	. . . . .
P	Th	26	0:23 9.5	6:28 0.0	12:45 11.0	19:10 −1.4
	F	27	1:05 9.5	7:20 0.0	13:38 10.7	20:02 −1.2
	S	28	2:07 9.5	8:16 0.0	14:32 10.4	20:54 −0.9
	S	29	3:02 9.5	9:15 0.2	15:28 9.9	21:49 −0.5
E ☾	M	30	4:02 9.4	10:15 0.3	16:27 9.4	22:47 −0.1
	Tu	31	5:00 9.4	11:18 0.4	17:28 9.0	23:45 0.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2 2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	4:25 4.0	10:18 0.0	16:54 3.2	22:18 —0.1
	Tu	2	5:19 4.2	11:16 —0.1	17:48 3.4	23:14 —0.3
N	W	3	6:12 4.5	12:11 —0.3	18:40 3.5	. . . . .
OP	Th	4	0:10 —0.4	7:04 4.6	13:02 —0.4	19:31 3.7
	F	5	1:04 —0.5	7:56 4.6	13:52 —0.4	20:22 3.8
	S	6	1:58 —0.5	8:48 4.5	14:41 —0.4	21:15 3.8
	S	7	2:52 —0.4	9:40 4.3	15:30 —0.3	22:07 3.8
	M	8	3:45 —0.2	10:34 4.0	16:18 —0.2	23:00 3.7
E	Tu	9	4:40 0.0	11:26 3.7	17:07 0.0	23:56 3.6
	W	10	5:36 0.3	12:22 3.3	17:51 0.2	. . . . .
☾	Th	11	0:54 3.6	6:40 0.6	13:20 3.1	18:50 0.4
	F	12	1:51 3.5	7:50 0.8	14:21 2.9	19:42 0.5
	S	13	2:50 3.4	9:12 0.9	15:21 2.8	20:42 0.6
	S	14	3:45 3.4	10:27 0.9	16:17 2.8	21:37 0.6
	M	15	4:37 3.5	11:17 0.8	17:10 2.8	22:26 0.6
	Tu	16	5:24 3.5	11:50 0.7	17:55 2 9	23:11 0.6
SA	W	17	6:09 3.6	12:16 0.6	18:38 3.0	23:51 0.5
	Th	18	6:50 3.7	12:45 0.4	19:18 3.1	. . . . .
●	F	19	0:38 0.4	7:30 3.7	13:18 0.3	19:56 3.1
	S	20	1:12 0.3	8:10 3.7	13:51 0.1	20:33 3.2
	S	21	1:50 0.2	8:48 3.6	14:26 0.0	21:10 3.2
	M	22	2:28 0.2	9:27 3.5	15:02 0.0	21:50 3.2
	Tu	23	3:09 0.1	10:06 3.4	15:40 0.0	22:30 3.2
E	W	24	3:52 0.1	10:47 3.2	16:20 0.0	23:15 3.3
	Th	25	4:40 0.2	11:32 3.0	17:02 0.1	. . . . .
	F	26	0:06 3.3	5:34 0.2	12:23 2.9	17:48 0.2
☽	S	27	1:00 3.3	6:34 0.3	13:24 2.8	18:41 0.2
	S	28	2:01 3.5	7:40 0.3	14:30 2.8	19:43 0.3
	M	29	3:04 3.6	8:50 0.3	15:38 2.9	20:52 0.2
	Tu	30	4:05 3.9	9:58 0.2	16:37 3.1	22:00 0.0
N	W	31	5:03 4.1	11:00 0.0	17:32 3.4	23:02 —0.2

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	5:58 4.3	11:57 —0.2	18:24 3.6	. . . . .
○	F	2	0:02 —0.4	6:50 4.4	12:47 —0.4	19:14 3.9
	S	3	0:57 —0.5	7:40 4.5	13:35 —0.5	20:08 4.1
	S	4	1:49 —0.6	8:28 4.4	14:20 —0.5	20:52 4.1
	M	5	2:38 —0.5	9:18 4.2	15:05 —0.5	21:40 4.1
E	Tu	6	3:28 —0.4	10:07 3.9	15:49 —0.3	22:31 4.0
	W	7	4:15 —0.1	10:58 3.6	16:32 —0.1	23:24 3.8
	Th	8	5:05 0.2	11:49 3.2	17:17 0.1	. . . . .
☾	F	9	0:18 3.6	5:57 0.5	12:45 2.9	18:00 0.4
	S	10	1:15 3.3	6:55 0.8	13:45 2.7	18:52 0.7
	S	11	2:18 3.2	8:12 1.0	14:52 2.6	19:50 0.8
	M	12	3:17 3.2	9:53 1.1	15:54 2.6	20:57 0.9
S	Tu	13	4:12 3.2	10:50 1.0	16:48 2.7	22:00 0.8
A	W	14	5:02 3.3	11:22 0.8	17:34 2.8	22:53 0.7
	Th	15	5:45 3.4	11:48 0.6	18:15 3.0	23:27 0.5
	F	16	6:26 3.6	12:07 0.4	18:50 3.2	. . . . .
	S	17	0:18 0.3	7:05 3.7	12:50 0.2	19:27 3.4
●	S	18	0:56 0.1	7:44 3.7	13:24 0.0	20:04 3.5
	M	19	1:33 0.0	8:22 3.7	13:58 —0.2	20:40 3.6
E	Tu	20	2:12 —0.1	9:00 3.6	14:34 —0.2	21:17 3.6
	W	21	2:52 —0.2	9:38 3.5	15:10 —0.2	21:58 3.6
	Th	22	3:35 —0.2	10:18 3.3	15:48 —0.1	22:42 3.6
	F	23	4:20 —0.1	11:02 3.1	16:30 0.0	23:33 3.5
	S	24	5:12 0.1	11:55 2.8	17:15 0.1	. . . . .
☽	S	25	0:30 3.4	6:09 0.2	12:59 2.7	18:11 0.3
	M	26	1:36 3.4	7:15 0.4	14:10 2.7	19:18 0.4
N	Tu	27	2:43 3.5	8:30 0.4	15:20 2.9	20:35 0.3
	W	28	3:50 3.7	9:41 0.3	16:22 3.2	21:49 0.1
	Th	29	4:49 3.9	10:45 0.1	17:17 3.5	22:56 —0.1

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	5:43 4.1	11:39 —0.1	18:07 3.8	23:55 —0.4
	S	2	6:33 4.3	12:27 —0.3	18:55 4.1	. . . . .
○	S	3	0:46 —0.6	7:20 4.3	13:10 —0.5	19:40 4.3
E	M	4	1:33 —0.6	8:07 4.2	13:53 —0.5	20:27 4.4
	Tu	5	2:19 —0.5	8:52 4.0	14:35 —0.5	21:13 4.3
	W	6	3:08 —0.5	9:38 3.7	15:15 —0.3	22:00 4.1
	Th	7	3:47 —0.1	10:25 3.4	15:54 —0.1	22:48 3.8
	F	8	4:30 0.2	11:14 3.1	16:33 0.2	23:40 3.5
	S	9	5:16 0.6	12:10 2.7	17:15 0.5	. . . . .
☾	S	10	0:38 3.2	6:07 0.8	13:13 2.5	18:04 0.8
S	M	11	1:40 3.0	7:09 1.0	14:23 2.5	19:05 1.0
A	Tu	12	2:44 3.0	8:33 1.1	15:28 2.5	20:21 1.0
	W	13	3:43 3.0	9:55 1.0	16:32 2.7	21:35 0.9
	Th	14	4:33 3.1	10:35 0.8	17:05 2.9	22:32 0.7
	F	15	5:17 3.3	11:07 0.6	17:43 3.2	23:15 0.5
	S	16	5:57 3.5	11:40 0.3	18:20 3.4	23:55 0.2
	S	17	6:37 3.6	12:15 0.0	18:55 3.6	. . . . .
●	M	18	0:34 0.0	7:15 3.7	12:50 —0.2	19:32 3.8
E	Tu	19	1:02 —0.2	7:52 3.7	13:25 —0.3	20:08 3.9
	W	20	1:51 —0.4	8:30 3.6	14:00 —0.3	20:47 4.0
	Th	21	2:32 —0.4	9:10 3.5	14:40 —0.3	21:30 3.9
	F	22	3:15 —0.3	9:52 3.2	15:18 —0.2	22:17 3.8
	S	23	4:02 —0.2	10:40 3.0	16:02 0.0	23:10 3.6
	S	24	4:53 0.0	11:37 2.8	16:50 0.2	. . . . .
N ☽	M	25	0:10 3.5	5:51 0.2	12:45 2.7	17:50 0.4
	Tu	26	1:17 3.4	6:58 0.4	14:00 2.8	19:07 0.5
	W	27	2:30 3.4	8:14 0.5	15:08 3.0	20:28 0.4
P	Th	28	3:35 3.6	9:27 0.4	16:06 3.3	21:40 0.2
	F	29	4:34 3.7	10:27 0.2	16:58 3.7	22:50 —0.1
	S	30	5:26 3.9	11:17 —0.1	17:47 4.0	23:44 —0.3
	S	31	6:14 4.0	12:00 —0.3	18:32 4.3	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian west: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N,S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
APRIL.							
E ○	M	1	0:31 −0.4	6:59 4.0	12:42 −0.4	19:17 4.4	
	Tu	2	1:16 −0.5	7:43 4.0	13:23 −0.5	20:00 4.4	
	W	3	1:58 −0.4	8:28 3.8	14:02 −0.3	20:45 4.3	
	Th	4	2:38 −0.2	9:10 3.5	14:40 −0.2	21:30 4.0	
	F	5	3:18 0.0	9:55 3.2	15:17 0.1	22:17 3.7	
	S	6	3:59 0.3	10:45 2.9	15:55 0.3	23:06 3.4	
	☽	7	4:40 0.5	11:40 2.6	16:35 0.6	. . . . .	
S	M	8	0:02 3.1	5:27 0.7	12:41 2.5	17:21 0.8	
☾ A	Tu	9	1:05 2.9	6:23 0.9	13:50 2.4	18:20 1.0	
	W	10	2:05 2.8	7:27 1.0	14:52 2.5	19:38 1.0	
	Th	11	3:05 2.9	8:35 0.9	15:44 2.7	20:53 1.0	
	F	12	3:56 3.0	9:30 0.7	16:27 3.0	21:26 0.8	
	S	13	4:40 3.2	10:15 0.5	17:05 3.3	22:40 0.5	
	☽	14	5:23 3.4	10:56 0.2	17:43 3.6	23:24 0.1	
E	M	15	6:04 3.5	11:37 0.0	18:21 3.9	. . . . .	
	Tu	16	0:07 −0.2	6:43 3.6	12:17 −0.2	19:00 4.1	
●	W	17	0:48 −0.4	7:23 3.6	12:55 −0.4	19:40 4.2	
	Th	18	1:31 −0.5	8:05 3.6	13:33 −0.4	20:22 4.2	
	F	19	2:14 −0.5	8:48 3.5	14:13 −0.3	21:08 4.1	
	S	20	3:00 −0.4	9:34 3.3	14:55 −0.2	21:59 4.0	
	☽	21	3:48 −0.2	10:27 3.1	15:43 0.0	22:53 3.8	
N P	M	22	4:40 0.0	11:28 2.9	16:38 0.2	23:55 3.6	
	Tu	23	5:40 0.2	12:36 2.9	17:46 0.4	. . . . .	
☽	W	24	1:04 3.4	6:46 0.4	13:45 3.0	19:05 0.5	
	Th	25	2:12 3.4	7:57 0.5	14:48 3.2	20:25 0.4	
	F	26	3:17 3.5	9:03 0.3	15:45 3.5	21:38 0.3	
	S	27	4:13 3.6	10:00 0.2	16:36 3.8	22:40 0.1	
E	☽	28	5:05 3.6	10:48 0.0	17:34 4.1	23:30 −0.1	
	M	29	5:52 3.7	11:32 −0.1	18:10 4.3	. . . . .	
	Tu	30	0:15 −0.2	6:37 3.7	12:12 −0.2	18:53 4.4	
MAY.							
○	W	1	0:56 −0.2	7:18 3.6	12:51 −0.2	19:37 4.3	
	Th	2	1:36 −0.1	8:02 3.5	13:30 −0.1	20:20 4.2	
	F	3	2:13 0.0	8:45 3.3	14:07 0.0	21:03 3.9	
	S	4	2:52 0.1	9:30 3.1	14:43 0.2	21:48 3.6	
S	☽	5	3:30 0.3	10:20 2.8	15:31 0.4	22:35 3.3	
	M	6	4:10 0.5	11:10 2.7	16:00 0.6	23:26 3.1	
A	Tu	7	4:54 0.6	12:08 2.5	16:45 0.8	. . . . .	
	W	8	0:24 2.9	5:44 0.7	13:09 2.5	17:41 1.0	
☾	Th	9	1:22 2.8	6:40 0.7	14:06 2.6	18:52 1.0	
	F	10	2:20 2.8	7:40 0.7	14:56 2.8	20:04 0.9	
	S	11	3:14 2.9	8:37 0.6	15:44 3.1	21:10 0.7	
E	☽	12	4:01 3.1	9:30 0.4	16:26 3.5	22:08 0.4	
	M	13	4:47 3.2	10:14 0.1	17:08 3.8	22:52 0.1	
	Tu	14	5:30 3.4	10:57 −0.1	17:49 4.1	23:40 −0.2	
	W	15	6:15 3.4	11:40 −0.2	18:31 4.3	. . . . .	
●	Th	16	0:25 −0.4	6:58 3.5	12:23 −0.3	19:16 4.4	
	F	17	1:11 −0.5	7:44 3.5	13:09 −0.4	20:04 4.4	
	S	18	1:58 −0.5	8:30 3.5	13:53 −0.3	20:54 4.3	
N P	☽	19	2:46 −0.4	9:22 3.4	14:41 −0.2	21:47 4.2	
	M	20	3:36 −0.2	10:18 3.3	15:36 0.0	22:43 3.9	
	Tu	21	4:30 0.0	11:19 3.2	16:37 0.0	23:44 3.7	
	W	22	5:28 0.1	12:20 3.2	17:44 0.3	. . . . .	
☽	Th	23	0:49 3.5	6:30 0.3	13:24 3.3	18:56 0.4	
	F	24	1:51 3.4	7:34 0.3	14:25 3.5	20:14 0.4	
E	S	25	2:54 3.4	8:36 0.3	15:20 3.7	21:28 0.4	
	☽	26	3:50 3.4	9:31 0.2	16:12 3.9	22:30 0.3	
	M	27	4:43 3.4	10:20 0.1	17:01 4.0	23:20 0.2	
	Tu	28	5:30 3.4	11:03 0.1	17:48 4.2	. . . . .	
	W	29	0:02 0.2	6:17 3.4	11:44 0.0	18:32 4.2	
○	Th	30	0:41 0.2	7:01 3.3	12:25 0.0	19:16 4.1	
	F	31	1:16 0.2	7:44 3.3	13:04 0.1	20:00 4.0	
JUNE.							
S	S	1	1:52 0.2	8:30 3.2	13:40 0.2	20:42 3.8	
	☽	2	2:30 0.2	9:10 3.0	14:20 0.3	21:25 3.6	
	M	3	3:06 0.3	9:56 2.9	14:55 0.4	22:10 3.4	
A	Tu	4	3:44 0.3	10:45 2.8	15:34 0.6	22:55 3.2	
	W	5	4:25 0.4	11:32 2.7	16:16 0.7	23:44 3.0	
	Th	6	5:10 0.5	12:25 2.7	17:10 0.7	. . . . .	
☾	F	7	0:37 2.9	5:56 0.5	13:16 2.8	18:10 0.7	
	S	8	1:30 2.8	6:48 0.5	14:08 3.0	19:16 0.7	
E	☽	9	2:24 2.8	7:41 0.4	14:57 3.2	20:20 0.5	
	M	10	3:17 2.9	8:35 0.3	15:45 3.5	21:22 0.3	
	Tu	11	4:07 3.0	9:28 0.2	16:32 3.8	22:20 0.1	
	W	12	4:58 3.2	10:20 0.0	17:20 4.1	23:14 −0.1	
	Th	13	5:47 3.3	11:12 −0.2	18:10 4.4	. . . . .	
	F	14	0:06 −0.3	6:35 3.4	12:02 −0.3	18:57 4.5	
● N	S	15	0:55 −0.4	7:25 3.5	12:52 −0.4	19:47 4.5	
P	☽	16	1:45 −0.5	8:15 3.6	13:43 −0.4	20:38 4.5	
	M	17	2:34 −0.4	9:08 3.6	14:36 −0.3	21:31 4.3	
	Tu	18	3:24 −0.3	10:03 3.6	15:33 −0.2	22:28 4.1	
	W	19	4:15 −0.2	11:00 3.6	16:30 0.0	23:25 3.8	
	Th	20	5:08 0.0	11:57 3.5	17:32 0.2	. . . . .	
☽ E	F	21	0:25 3.5	6:02 0.1	12:56 3.5	18:35 0.4	
	S	22	1:25 3.3	6:57 0.2	13:55 3.6	19:46 0.5	
	☽	23	2:24 3.2	7:55 0.3	14:51 3.7	21:01 0.6	
	M	24	3:23 3.1	8:50 0.4	15:46 3.7	22:10 0.6	
	Tu	25	4:18 3.1	9:45 0.3	16:38 3.8	23:06 0.6	
	W	26	5:10 3.1	10:36 0.3	17:27 3.9	23:51 0.5	
	Th	27	5:58 3.1	11:21 0.3	18:14 3.9	. . . . .	
S	F	28	0:30 0.4	6:43 3.1	12:04 0.3	18:58 3.9	
○	S	29	1:01 0.4	7:25 3.1	12:43 0.3	19:40 3.9	
	☽	30	1:33 0.3	8:06 3.1	13:24 0.3	20:22 3.8	

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	2:05 0.2	8:55 3.1	14:00 0.3	21:01 3.6
	Tu	2	2:42 0.2	9:34 3.0	14:36 0.4	21:41 3.4
	W	3	3:20 0.2	10:14 3.0	15:16 0.4	22:22 3.3
	Th	4	3:58 0.2	10:54 2.9	15:58 0.4	23:02 3.1
	F	5	4:37 0.2	11:35 2.9	16:44 0.4	23:46 2.9
E	S	6	5:20 0.2	12:22 3.0	17:37 0.4	. . . . .
☾	S	7	0:38 2.8	6:06 0.3	13:14 3.1	18:36 0.4
	M	8	1:34 2.8	6:54 0.3	14:10 3.3	19:40 0.4
	Tu	9	2:37 2.8	7:48 0.3	15:07 3.5	20:47 0.3
	W	10	3:38 2.9	8:48 0.2	16:02 3.8	21:50 0.2
	Th	11	4:35 3.0	9:50 0.0	16:57 4.0	22:50 0.0
	F	12	5:30 3.2	10:49 −0.2	17:50 4.3	23:47 −0.2
N	S	13	6:21 3.4	11:45 −0.3	18:42 4.5	. . . . .
● P	S	14	0:39 −0.4	7:12 3.6	12:41 −0.5	19:34 4.6
	M	15	1:30 −0.5	8:02 3.8	13:35 −0.5	20:25 4.5
	Tu	16	2:17 −0.5	8:52 3.9	14:28 −0.5	21:16 4.4
	W	17	3:06 −0.5	9:44 3.9	15:21 −0.5	22:08 4.1
	Th	18	3:53 −0.4	10:35 3.9	16:14 −0.2	23:02 3.8
E	F	19	4:41 −0.2	11:30 3.8	17:08 0.0	23:57 3.5
	S	20	5:30 0.0	12:25 3.7	18:06 0.3	. . . . .
☽	S	21	0:56 3.2	6:21 0.2	13:24 3.6	19:08 0.6
	M	22	1:57 3.0	7:14 0.4	14:24 3.5	20:17 0.8
	Tu	23	3:01 2.9	8:10 0.6	15:24 3.5	21:37 0.9
	W	24	4:02 2.9	9:10 0.6	16:20 3.5	22:45 0.8
	Th	25	4:58 2.9	10:10 0.6	17:11 3.6	23:31 0.7
S	F	26	5:47 3.0	11:00 0.5	17:58 3.7	. . . . .
	S	27	0:07 0.6	6:31 3.1	11:46 0.5	18:41 3.7
○ A	S	28	0:38 0.4	7:12 3.2	12:30 0.4	19:22 3.8
	M	29	1:07 0.3	7:50 3.2	13:07 0.3	20:00 3.7
	Tu	30	1:42 0.1	8:27 3.2	13:48 0.2	20:39 3.7
	W	31	2:16 0.0	9:01 3.3	14:18 0.2	21:14 3.5

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:49 0.0	9:37 3.3	14:55 0.1	21:50 3.4
E	F	2	3:24 0.0	10:12 3.2	15:36 0.1	22:28 3.2
	S	3	4:00 0.0	10:51 3.2	16:20 0.1	23:07 3.0
	S	4	4:40 0.1	11:38 3.2	17:06 0.2	23:52 2.8
☾	M	5	5:28 0.2	12:30 3.2	18:04 0.3	. . . . .
	Tu	6	0:48 2.7	6:10 0.3	13:31 3.3	19:07 0.3
	W	7	2:00 2.7	7:10 0.3	14:36 3.4	20:15 0.3
	Th	8	3:13 2.8	8:18 0.3	15:40 3.7	21:25 0.3
N	F	9	4:16 3.0	9:28 0.1	16:38 3.9	22:30 0.1
	S	10	5:14 3.3	10:34 −0.1	17:35 4.2	23:30 −0.1
	S	11	6:06 3.6	11:36 −0.3	18:28 4.4	. . . . .
P	M	12	0:20 −0.3	6:55 3.9	12:30 −0.5	19:20 4.5
●	Tu	13	1:10 −0.5	7:42 4.1	13:24 −0.7	20:10 4.5
	W	14	1:55 −0.6	8:30 4.2	14:14 −0.7	20:57 4.3
E	Th	15	2:40 −0.6	9:18 4.2	15:03 −0.6	21:45 4.1
	F	16	3:24 −0.5	10:07 4.1	15:51 −0.3	22:34 3.8
	S	17	4:08 −0.3	10:56 4.0	16:40 0.0	23:26 3.4
	S	18	4:53 0.0	11:50 3.7	17:33 0.3	. . . . .
☽	M	19	0:23 3.1	5:40 0.3	12:48 3.5	18:30 0.6
	Tu	20	1:27 2.8	6:32 0.6	13:52 3.3	19:36 0.9
	W	21	2:34 2.7	7:32 0.8	14:57 3.2	21:04 1.0
S	Th	22	3:41 2.7	8:42 0.8	15:57 3.3	22:25 1.0
	F	23	4:40 2.8	9:51 0.8	16:50 3.3	23:08 0.8
	S	24	5:28 2.9	10:48 0.7	17:37 3.5	23:38 0.6
A	S	25	6:09 3.1	11:30 0.5	18:18 3.6	. . . . .
	M	26	0:08 0.4	6:45 3.3	12:10 0.4	18:57 3.7
○	Tu	27	0:38 0.2	7:20 3.4	12:48 0.2	19:34 3.7
	W	28	1:11 0.0	7:55 3.5	13:22 0.0	20:10 3.7
E	Th	29	1:44 −0.1	8:30 3.6	13:57 −0.1	20:46 3.6
	F	30	2:16 −0.2	9:01 3.6	14:36 −0.2	21:20 3.4
	S	31	2:50 −0.2	9:38 3.6	15:15 −0.2	22:56 3.2

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:26 −0.1	10:18 3.5	15:58 −0.1	22:36 3.0
	M	2	4:05 0.0	11:05 3.4	16:47 0.0	23:20 2.8
	Tu	3	4:46 0.2	12:01 3.3	17:42 0.2	. . . . .
☾	W	4	0:24 2.7	5:40 0.3	13:05 3.3	18:45 0.3
N	Th	5	1:40 2.6	6:44 0.4	14:14 3.4	19:54 0.4
	F	6	2:56 2.8	8:00 0.4	15:22 3.6	21:08 0.4
	S	7	4:00 3.0	9:18 0.2	16:24 3.8	22:12 0.2
	S	8	4:56 3.4	10:26 0.0	17 20 4.0	23:10 −0.1
P	M	9	5:46 3.8	11:25 −0.4	18:12 4.2	23:58 −0.3
●	Tu	10	6:34 4.1	12:18 −0.6	19:01 4.3	. . . . .
E	W	11	0:45 −0.5	7:20 4.4	13:10 −0.7	19:47 4.3
	Th	12	1:30 −0.6	8:05 4.5	13:56 −0.7	20:32 4.2
	F	13	2:12 −0.6	8:50 4.4	14:42 −0.6	21:18 3.9
	S	14	2:58 −0.5	9:38 4.3	15:27 −0.3	22:07 3.6
	S	15	3:34 −0.2	10:26 4.0	16:13 0.0	22:56 3.2
	M	16	4:16 0.1	11:18 3.7	17:00 0.3	23:52 2.9
	Tu	17	5:01 0.4	12:16 3.3	17:54 0.6	. . . . .
☽ S	W	18	0:58 2.7	5:54 0.7	13:21 3.1	18:55 0.9
	Th	19	2:10 2.6	6:57 0.9	14:28 3.0	20:12 1.0
	F	20	3:18 2.6	8:12 1.0	15:30 3.1	21:33 1.0
A	S	21	4:12 2.7	9:30 1.0	16:23 3.2	22:21 0.8
	S	22	4:58 2.9	10:24 0.8	17:06 3.3	22:53 0.6
	M	23	5:37 3.2	11:04 0.6	17:48 3.4	23:25 0.4
	Tu	24	6:11 3.4	11:43 0.3	18:26 3.6	. . . . .
	W	25	0:00 0.1	6:45 3.6	12:18 0.1	19:02 3.6
E ○	Th	26	0:34 −0.1	7:20 3.8	12:57 −0.1	19:40 3.6
	F	27	1:08 −0.2	7:54 3.9	13:36 −0.3	20:16 3.5
	S	28	1:42 −0.2	8:28 3.9	14:12 −0.4	20:52 3.4
	S	29	2:16 −0.3	9:09 3.8	14:55 −0.3	21:30 3.2
	M	30	2:56 −0.2	9:52 3.7	15:40 −0.2	22:15 3.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	3:35	10:42	16:29	23:06
			0.0	3.6	−0.1	2.8
	W	2	4:20	11:40	17:24	. . .
			0.2	3.4	0.2	. . .
N ☾	Th	3	0:12	5:18	12:45	18:27
			2.7	0.3	3.4	0.3
	F	4	1:30	6:30	13:55	19:38
			2.7	0.4	3.4	0.4
	S	5	2:40	7:52	15:06	20:48
			2.9	0.4	3.5	0.4
	S	6	3:41	9:10	16:07	21:50
			3.2	0.2	3.7	0.2
P	M	7	4:35	10:16	17:01	22:44
			3.6	0.0	3.9	−0.1
	Tu	8	5:24	11:12	17:51	23:33
			4.0	−0.3	4.0	−0.3
E	W	9	6:11	12:03	18:40	. . .
			4.3	−0.5	4.1	. . .
●	Th	10	0:17	6:56	12:50	19:24
			−0.5	4.5	−0.6	4.0
	F	11	1:00	7:40	13:35	20:08
			−0.5	4.6	−0.5	3.9
	S	12	1:40	8:25	14:18	20:54
			−0.4	4.5	−0.4	3.6
	S	13	2:20	9:10	15:01	21:40
			−0.3	4.2	−0.2	3.4
	M	14	3:02	9:58	15:46	22:31
			−0.1	3.9	0.1	3.1
	Tu	15	3:42	10:48	16:31	23:27
			0.2	3.6	0.3	2.8
S	W	16	4:27	11:45	17:20	. . .
			0.5	3.3	0.6	. . .
☽	Th	17	0:30	5:17	12:47	18:16
			2.6	0.7	3.0	0.8
	F	18	1:40	6:18	13:51	19:18
			2.6	1.0	2.9	0.9
A	S	19	2:42	7:30	14:50	20:20
			2.6	1.1	2.9	0.9
	S	20	3:35	8:45	15:44	21:14
			2.8	1.0	3.0	0.8
	M	21	4:18	9:42	16:31	22:00
			3.0	0.9	3.1	0.5
	Tu	22	4:57	10:27	17:12	22:40
			3.3	0.6	3.3	0.3
E	W	23	5:32	11:08	17:52	23:19
			3.5	0.3	3.4	0.1
	Th	24	6:10	11:50	18:30	23:56
			3.8	0.0	3.5	−0.1
○	F	25	6:45	12:30	19:09	. . .
			4.0	−0.2	3.5	. . .
	S	26	0:33	7:23	13:11	19:48
			−0.2	4.1	−0.4	3.4
	S	27	1:10	8:03	13:55	20:30
			−0.3	4.1	−0.5	3.3
	M	28	1:50	8:48	14:40	21:14
			−0.2	4.1	−0.4	3.2
	Tu	29	2:32	9:35	15:27	22:03
			−0.2	3.9	−0.3	3.0
N	W	30	3:18	10:28	16:17	23:00
			0.0	3.7	−0.1	2.9
	Th	31	4:10	11:26	17:12	. . .
			0.2	3.6	0.1	. . .

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	0:07	5:14	12:30	18:13
			2.8	0.3	3.4	0.3
	S	2	1:16	6:28	13:40	19:20
			2.9	0.4	3.4	0.3
P	S	3	2:20	7:45	14:48	20:25
			3.1	0.4	3.4	0.3
	M	4	3:18	8:57	15:47	21:23
			3.4	0.3	3.5	0.2
E	Tu	5	4:12	10:00	16:40	22:15
			3.8	0.1	3.6	0.0
	W	6	5:00	10:57	17:30	23:03
			4.1	−0.1	3.7	−0.2
	Th	7	5:47	11:45	18:16	23:47
			4.3	−0.2	3.7	−0.3
●	F	8	6:32	12:30	19:02	. . .
			4.4	−0.3	3.7	. . .
	S	9	0:30	7:17	13:14	19:47
			−0.3	4.4	−0.3	3.6
	S	10	1:11	8:01	13:57	20:32
			−0.2	4.3	−0.2	3.4
	M	11	1:52	8:47	14:40	21:20
			−0.1	4.1	0.0	3.2
S	Tu	12	2:33	9:34	15:23	22:10
			0.1	3.8	0.1	3.0
	W	13	3:16	10:22	16:05	23:02
			0.3	3.5	0.3	2.8
	Th	14	3:59	11:15	16:50	. . .
			0.5	3.2	0.5	. . .
	F	15	0:00	4:44	12:10	17:37
			2.7	0.8	3.0	0.6
A ☽	S	16	1:00	5:37	13:09	18:30
			2.6	0.9	2.9	0.7
	S	17	1:57	6:38	14:07	19:22
			2.7	1.0	2.8	0.7
	M	18	2:47	7:45	15:00	20:15
			2.8	0.9	2.9	0.6
P	Tu	19	3:32	8:45	15:48	21:03
			3.0	0.8	3.0	0.5
	W	20	4:13	9:40	16:33	21:49
			3.3	0.6	3.1	0.3
	Th	21	4:53	10:30	17:17	22:32
			3.6	0.3	3.2	0.1
	F	22	5:32	11:17	17:58	23:17
			3.8	0.0	3.3	−0.1
	S	23	6:13	12:03	18:40	. . .
			4.1	−0.3	3.3	. . .
○	S	24	0:00	6:57	12:50	19:24
			−0.2	4.2	−0.4	3.4
	M	25	0:45	7:43	13:37	20:10
			−0.3	4.3	−0.5	3.3
N	Tu	26	1:30	8:30	14:25	20:59
			−0.3	4.2	−0.4	3.3
	W	27	2:20	9:20	15:13	21:52
			−0.2	4.1	−0.3	3.2
P	Th	28	3:10	10:15	16:05	22:48
			−0.1	3.9	−0.2	3.2
	F	29	4:07	11:12	16:59	23:51
			0.0	3.7	0.0	3.2
	S	30	5:10	12:13	17:55	. . .
			0.2	3.5	0.1	. . .

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:58	6:17	13:20	18:55
			3.2	0.3	3.4	0.2
E	M	2	1:54	7:27	14:23	19:53
			3.4	0.3	3.3	0.2
	Tu	3	2:51	8:35	15:23	20:50
			3.6	0.4	3.3	0.2
	W	4	3:46	9:41	16:18	21:43
			3.8	0.3	3.3	0.1
	Th	5	4:37	10:40	17:08	22:32
			4.0	0.2	3.4	0.0
	F	6	5:25	11:30	17:57	23:20
			4.1	0.2	3.4	0.0
	S	7	6:12	12:15	18:43	. . .
			4.2	0.1	3.3	. . .
●	S	8	0:05	6:57	12:57	19:28
			0.0	4.2	0.1	3.3
S	M	9	0:48	7:42	13:37	20:13
			0.0	4.1	0.1	3.2
	Tu	10	1:30	8:27	14:18	21:00
			0.1	4.0	0.1	3.1
	W	11	2:10	9:12	14:58	21:45
			0.2	3.7	0.2	3.0
	Th	12	2:52	9:57	15:39	22:33
			0.3	3.5	0.2	2.9
	F	13	3:34	10:42	16:18	23:22
			0.5	3.2	0.3	2.8
A	S	14	4:15	11:29	17:00	. . .
			0.6	3.0	0.4	. . .
	S	15	0:11	5:00	12:18	17:43
			2.7	0.7	2.9	0.5
☽	M	16	1:00	5:51	13:10	18:30
			2.8	0.8	2.8	0.5
E	Tu	17	1:50	6:50	14:05	19:18
			2.9	0.7	2.7	0.4
	W	18	2:37	7:53	15:00	20:07
			3.1	0.6	2.8	0.4
	Th	19	3:25	8:55	15:50	20:58
			3.3	0.5	2.9	0.3
	F	20	4:12	9:52	16:40	21:52
			3.6	0.3	3.0	0.1
	S	21	5:00	10:47	17:28	22:45
			3.8	0.0	3.1	0.0
	S	22	5:38	11:40	18:16	23:36
			4.1	−0.2	3.2	−0.2
N ○	M	23	6:35	12:32	19:07	. . .
			4.3	−0.4	3.4	. . .
	Tu	24	0:28	7:25	13:22	19:55
			−0.3	4.4	−0.5	3.5
P	W	25	1:20	8:15	14:10	20:45
			−0.4	4.4	−0.5	3.5
	Th	26	2:12	9:07	15:00	21:37
			−0.4	4.3	−0.5	3.5
	F	27	3:06	10:00	15:50	22:31
			−0.3	4.1	−0.4	3.6
	S	28	4:03	10:55	16:40	23:27
			−0.2	3.9	−0.2	3.6
	S	29	5:00	11:55	17:32	. . .
			0.0	3.7	0.0	. . .
E ☾	M	30	0:25	6:00	12:53	18:25
			3.6	0.2	3.4	0.1
	Tu	31	1:23	7:05	13:54	19:20
			3.6	0.3	3.2	0.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	6:04	12:50	18:30	. . .
			2.9	0.0	1.9	. . .
	Tu	2	0:40	6:57	18:44	19:25
			0.1	3.1	−0.2	2.0
N	W	3	1:32	7:50	14:34	20:20
			0.0	3.2	−0.3	2.1
○ P	Th	4	2:27	8:42	15:24	21:14
			−0.1	3.2	−0.4	2.2
	F	5	3:21	9:34	16:12	22:07
			−0.1	3.2	−0.4	2.3
	S	6	4:18	10:25	17:07	23:00
			−0.2	3.1	−0.5	2.4
	S	7	5:15	11:18	17:57	23:55
			−0.2	2.9	−0.4	2.5
	M	8	6:14	12:12	18:48	. . .
			−0.1	2.7	−0.3	. . .
E	Tu	9	0:50	7:15	13:10	19:41
			2.5	0.0	2.5	−0.2
	W	10	1:47	8:20	14:12	20:36
			2.5	0.1	2.2	−0.1
☾	Th	11	2:45	9:17	15:16	21:30
			2.5	0.2	2.0	0.0
	F	12	3:42	10:26	16:27	22:28
			2.5	0.3	1.8	0.1
	S	13	4:38	11:33	17:37	23:22
			2.5	0.4	1.7	0.2
	S	14	5:32	12:33	18:44	. . .
			2.5	0.4	1.7	. . .
	M	15	0:15	6:23	13:26	19:40
			0.2	2.6	0.4	1.7
	Tu	16	1:04	7:08	14:08	20:22
			0.2	2.6	0.3	1.7
S A	W	17	1:50	7:52	14:45	20:53
			0.2	2.6	0.2	1.7
	Th	18	2:33	8:32	15:19	21:23
			0.3	2.6	0.1	1.8
●	F	19	3:15	9:10	15:54	21:52
			0.3	2.6	0.0	1.9
	S	20	3:54	9:48	16:34	22:23
			0.3	2.6	−0.1	2.0
	S	21	4:33	10:25	17:10	22:56
			0.3	2.5	−0.1	2.2
	M	22	5:13	11:02	17:47	23:32
			0.3	2.5	0.0	2.3
	Tu	23	5:55	11:40	18:23	. . .
			0.3	2.4	0.1	. . .
E	W	24	0:14	6:43	12:19	19:00
			2.4	0.3	2.3	0.1
	Th	25	1:00	7:36	13:02	19:43
			2.4	0.3	2.1	0.2
	F	26	1:50	8:37	13:49	20:29
			2.5	0.3	2.0	0.3
☽	S	27	2:45	9:40	14:46	21:23
			2.6	0.3	1.9	0.4
	S	28	3:45	10:37	15:54	22:23
			2.6	0.3	1.8	0.3
	M	29	4:45	11:37	17:08	23:26
			2.7	0.2	1.8	0.2
	Tu	30	5:43	12:34	18:14	. . .
			2.8	0.1	1.9	. . .
N	W	31	0:27	6:40	13:26	19:13
			0.1	2.9	−0.1	2.0

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	1:25	7:35	14:15	20:07
			−0.1	3.1	−0.2	2.2
○	F	2	2:20	8:27	15:03	20.58
			−0.2	3.1	−0.4	2.4
	S	3	3:13	9:18	15:53	21:49
			−0.3	3.1	−0.5	2.5
	S	4	4:06	10:08	16:40	22:38
			−0.3	3.0	−.05	2.7
	M	5	4:59	10:59	17:28	23:27
			−0.3	2.8	−0.4	2.7
E	Tu	6	5:53	11:50	18:16	. . .
			−0.2	2.6	−0.3	. . .
	W	7	0:18	6:50	12:43	19:06
			2.7	−0.1	2.4	−0.2
	Th	8	1:02	7:45	13:40	20:00
			2.6	0.1	2.1	0.0
☾	F	9	2:07	8:48	14:43	20:57
			2.5	0.2	1.9	0.2
	S	10	3:06	9:57	15:57	21:57
			2.5	0.4	1.7	0.3
	S	11	4:06	11:06	17:18	22:55
			2.4	0.5	1.6	0.3
	M	12	5:05	12:10	18:32	23:52
			2.4	0.5	1.6	0.3
S	Tu	13	5:58	13:02	19:25	. . .
			2.4	0.4	1.7	. . .
A	W	14	0:45	6:47	13:41	19:58
			0.3	2.4	0.3	1.7
	Th	15	1:30	7:31	14:15	20:24
			0.3	2.5	0.2	1.8
	F	16	2:13	8:10	14:48	20:48
			0.2	2.5	0.1	2.0
	S	17	2:52	8:47	15:18	21:17
			0.2	2.6	0.0	2.1
●	S	18	3:30	9:25	15:58	21:46
			0.1	2.6	−0.1	2.3
	M	19	4:08	9:57	16:33	22:19
			0.1	2.5	−0.1	2.4
E	Tu	20	4:46	10:32	17:05	22:57
			0.0	2.5	0.0	2.6
	W	21	5:30	11:09	17:39	23:38
			0.0	2.4	0.1	2.6
	Th	22	6:14	11:47	18:15	. . .
			0.1	2.3	0.2	. . .
	F	23	0:24	7:07	12:30	18:55
			2.6	0.1	2.1	0.3
	S	24	1:16	8:08	13:17	19:45
			2.6	0.2	2.0	0.4
☽	S	25	2:14	9:13	14:20	20:50
			2.6	0.2	1.8	0.4
	M	26	3:17	10:13	15:37	22:05
			2.6	0.3	1.7	0.4
N	Tu	27	4:22	11:17	16:48	23:16
			2.6	0.2	1.8	0.2
	W	28	5:26	12:15	18:05	. . .
			2.7	0.1	1.9	. . .
	Th	29	0:18	6:25	13:07	19:01
			0.1	2.8	0.0	2.1

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	1:16	7:20	13:57	19:52
			−0.1	2.8	−0.2	2.4
	S	2	2:08	8:12	14:44	20:39
			−0.3	2.9	−0.3	2.6
○	S	3	3:00	9:02	15:29	21:25
			−0.4	2.9	−0.4	2.8
E	M	4	3:50	9:50	16:18	22:12
			−0.4	2.8	−0.4	2.8
	Tu	5	4:40	10:38	16:57	22:57
			−0.4	2.7	−0.3	2.8
	W	6	5:30	11:25	17:43	23:45
			−0.3	2.4	−0.2	2.8
	Th	7	6:18	12:14	18:32	. . .
			−0.1	2.2	0.0	. . .
	F	8	0:37	7:15	13:08	19:25
			2.7	0.1	2.0	0.2
	S	9	1:31	8:17	14:13	20:24
			2.5	0.3	1.8	0.3
☾	S	10	2:30	9:24	15:30	21:27
			2.4	0.4	1.6	0.4
S	M	11	3:32	10:30	16:58	22:30
			2.3	0.5	1.6	0.5
A	Tu	12	4:34	11:32	18:08	23:30
			2.2	0.5	1.6	0.4
	W	13	5:30	12:20	18:45	. . .
			2.2	0.4	1.7	. . .
	Th	14	0:20	6:20	13:00	19:18
			0.4	2.3	0.3	1.9
	F	15	1:07	7:05	13:35	19:40
			0.3	2.3	0.2	2.0
	S	16	1:47	7:43	14:13	20:09
			0.2	2.4	0.1	2.2
	S	17	2:26	8:20	14:47	20:37
			0.0	2.5	0.0	2.4
●	M	18	3:03	8:53	15:20	21:08
			−0.1	2.5	−0.1	2.6
E	Tu	19	3:43	9:28	15:58	21:45
			−0.2	2.5	−0.1	2.7
	W	20	4:21	10:03	16:24	22:25
			−0.2	2.4	0.0	2.8
	Th	21	5:05	10:41	16:57	23:08
			−0.2	2.3	0.1	2.8
	F	22	5:58	11:22	17:35	23:56
			−0.1	2.2	0.2	2.8
	S	23	6:47	12:06	18:21	. . .
			0.0	2.1	0.3	. . .
	S	24	0:50	7:48	13:08	19:23
			2.7	0.1	1.9	0.4
N ☽	M	25	1:52	8:58	14:13	20:40
			2.6	0.2	1.8	0.4
	Tu	26	2:57	9:59	15:38	22:00
			2.5	0.2	1.8	0.3
	W	27	4:06	10:58	16:51	23:07
			2.5	0.2	1.9	0.2
P	Th	28	5:12	11:50	17:53	. . .
			2.5	0.1	2.1	. . .
	F	29	0:10	6:13	12:47	18:45
			0.0	2.6	−0.1	2.3
	S	30	1:05	7:10	13:35	19:32
			−0.2	2.6	−0.2	2.6
	S	31	1:57	7:58	14:18	20:16
			−0.3	2.7	−0.3	2.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case substract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	2:43 −0.4	8:45 2.6	15:00 −0.3	21:00 2.9
	Tu	2	3:28 −0.4	9:30 2.5	15:40 −0.2	21:44 2.9
	W	3	4:15 −0.3	10.14 2.4	16:24 −0.1	22:28 2.9
	Th	4	5:08 −0.2	10:00 2.2	17:10 0.0	23:14 2.8
	F	5	5:54 −0.1	11:45 2.0	17:58 0.2	. . . . .
	S	6	0:02 2.6	6:48 0.1	12:38 1.8	18:50 0.4
	S	7	0:54 2.5	7:45 0.3	13:40 1.7	19:50 0.5
S	M	8	1:50 2.3	8:46 0.4	14:55 1.6	20:56 0.6
☾ A	Tu	9	2:52 2.2	9:47 0.4	16:10 1.6	22:00 0.6
	W	10	3:53 2.1	10:48 0.4	17:07 1.7	22:58 0.5
	Th	11	4:54 2.1	11:30 0.3	17:46 1.8	23:50 0.4
	F	12	5:45 2.1	12:17 0.2	18:20 2.0	. . . . .
	S	13	0:35 0.3	6:30 2.2	12:54 0.1	18:52 2.3
	S	14	1:16 0.1	7:08 2.3	13:30 0.0	19:26 2.4
E	M	15	1:55 0.0	7:45 2.3	14:05 0.0	20:00 2.7
	Tu	16	2:34 −0.2	8:22 2.3	14:38 0.0	20:35 2.8
●	W	17	3:16 −0.3	9:00 2.4	15:12 0.0	21:16 3.0
	Th	18	4:00 −0.3	9:38 2.3	15:47 0.0	22:00 3.0
	F	19	4:46 −0.3	10:20 2.3	16:25 0.1	22:45 3.0
	S	20	5:35 −0.2	11:05 2.2	17:10 0.2	23:37 2.9
	S	21	6:30 −0.1	11:57 2.1	18:07 0.3	. . . . .
N P	M	22	0:32 2.7	7:30 0.0	13:01 2.0	19:18 0.4
	Tu	23	1:33 2.6	8:32 0.1	14:15 1.9	20:37 0.3
☽	W	24	2:40 2.5	9:35 0.1	15:28 2.0	21:50 0.3
	Th	25	3:50 2.4	10:32 0.1	16:34 2.1	22:57 0.1
	F	26	4:58 2.3	11:30 0.0	17:32 2.3	23:57 0.0
	S	27	6:00 2.4	12:18 −0.1	18:22 2.5	. . . . .
E	S	28	0:51 −0.1	6:53 2.4	13:05 −0.1	19:08 2.7
	M	29	1:37 −0.2	7:41 2.3	13:50 −0.2	19:52 2.8
	Tu	30	2:25 −0.2	8:28 2.3	14:32 −0.2	20:35 2.9

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	3:11 −0.2	9:10 2.2	15:14 −0.1	21:18 2.9
	Th	2	3:57 −0.2	9:54 2.1	15:57 0.0	22:02 2.9
	F	3	4:43 −0.1	10:36 2.0	16:41 0.2	22:46 2.8
	S	4	5:31 0.0	11:23 1.9	17:30 0.3	23:32 2.6
S	S	5	6:21 0.1	12:14 1.8	18:21 0.5	. . . . .
	M	6	0:20 2.4	7:13 0.2	13:12 1.7	19:20 0.6
A	Tu	7	1:12 2.3	8:07 0.3	14:14 1.7	20:22 0.6
	W	8	2:08 2.1	9:03 0.3	15:13 1.7	21:24 0.6
☾	Th	9	3:06 2.0	9:57 0.3	16:04 1.9	22:21 0.5
	F	10	4:03 2.0	10:45 0.3	16:48 2.0	23:13 0.4
	S	11	4:56 2.0	11:28 0.2	17:28 2.2	. . . . .
E	S	12	0:00 0.3	5:44 2.0	12:08 0.1	18:05 2.4
	M	13	0:42 0.1	6:27 2.1	12:47 0.1	18:44 2.7
	Tu	14	1:25 −0.1	7:08 2.1	13:24 0.1	19:25 2.8
	W	15	2:07 −0.2	7:50 2.2	14:00 0.0	20:08 3.0
●	Th	16	2:53 −0.3	8:31 2.2	14:38 0.0	20:52 3.1
	F	17	3:40 −0.4	9:16 2.2	15:20 0.1	21:40 3.1
	S	18	4:28 −0.4	10:04 2.2	16:07 0.1	22:29 3.1
N P	S	19	5:20 −0.3	10:56 2.2	17:00 0.2	23:21 3.0
	M	20	6:14 −0.3	11:54 2.1	18:05 0.2	. . . . .
	Tu	21	0:18 2.8	7:11 −0.2	12:57 2.1	19:15 0.2
	W	22	1:18 2.6	8:09 −0.1	14:04 2.1	20:26 0.2
☽	Th	23	2:22 2.4	9:08 0.0	15:10 2.2	21:35 0.2
	F	24	3:32 2.3	10:05 0.0	16:11 2.4	22:40 0.1
E	S	25	4:38 2.2	11:00 0.0	17:06 2.5	23:38 0.1
	S	26	5:40 2.1	11:50 0.0	17:57 2.6	. . . . .
	M	27	0:35 0.0	6:37 2.1	12:40 0.0	18:45 2.8
	Tu	28	1:25 0.0	7:28 2.0	13:22 0.0	19:30 2.8
	W	29	2:13 0.0	8:14 2.0	14:07 0.0	20:13 2.9
○	Th	30	3:00 0.0	8:58 1.9	14:52 0.1	20:57 2.9
	F	31	3:43 0.0	9:40 1.9	15:35 0.2	21:40 2.8

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	4:26 0.0	10:22 1.8	16:20 0.3	22:22 2.7
	S	2	5:10 0.0	11:05 1.8	17:06 0.4	23:06 2.6
	M	3	5:54 0.1	11:50 1.8	17:56 0.5	23:50 2.4
A	Tu	4	6:44 0.1	12:40 1.8	18:48 0.5	. . . . .
	W	5	0:36 2.3	7:32 0.2	13:28 1.9	19:44 0.6
	Th	6	1:28 2.1	8:20 0.2	14:17 2.0	20:40 0.6
☾	F	7	2:18 2.0	9:07 0.2	15:05 2.1	21:36 0.5
	S	8	3:05 1.9	9:53 0.2	15:51 2.2	22:30 0.4
E	S	9	4:00 1.9	10:37 0.2	16:36 2.4	23:19 0.3
	M	10	4:51 1.9	11:20 0.2	17:22 2.6	. . . . .
	Tu	11	0:02 0.2	5:43 1.9	12:02 0.2	18:09 2.8
	W	12	0:52 0.0	6:31 2.0	12:45 0.1	18:57 3.0
	Th	13	1:40 −0.1	7:20 2.0	13:29 0.1	19:44 3.1
	F	14	2:30 −0.3	8:10 2.1	14:16 0.0	20:34 3.2
● N	S	15	3:18 −0.3	9:00 2.2	15:05 0.0	21:24 3.2
P	S	16	4:07 −0.4	9:52 2.2	16:00 0.0	22:15 3.1
	M	17	4:58 −0.4	10:47 2.3	16:57 0.0	23:08 3.0
	Tu	18	5:53 −0.4	11:43 2.3	18:00 0.0	. . . . .
	W	19	0:02 2.8	6:46 −0.3	12:42 2.4	19:03 0.1
	Th	20	1:00 2.6	7:40 −0.2	13:42 2.4	20:08 0.1
☾ E	F	21	2:02 2.4	8:36 −0.1	14:42 2.4	21:15 0.1
	S	22	3:07 2.2	9:22 0.0	15:40 2.5	22:15 0.2
	S	23	4:18 2.0	10:28 0.0	16:38 2.6	23:20 0.2
	M	24	5:20 1.9	11:20 0.0	17:31 2.6	. . . . .
	Tu	25	0:21 0.2	6:24 1.8	12:13 0.1	18:22 2.7
	W	26	1:16 0.2	7:20 1.8	13:02 0.1	19:10 2.7
	Th	27	2:04 0.2	8:10 1.8	13:49 0.1	19:55 2.8
S	F	28	2:46 0.1	8:53 1.8	14:34 0.2	20:38 2.7
○	S	29	3:27 0.1	9:30 1.8	15:18 0.2	21:20 2.7
	S	30	4:05 0.1	10:07 1.8	16:02 0.3	22:01 2.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	4:44	10:43	16:45	22:40
			0.0	1.9	0.4	2.6
	Tu	2	5:23	11:20	17:30	23:20
			0.0	1.9	0.4	2.4
	W	3	6:08	12:00	18:16	23:58
			0.0	2.0	0.4	2.3
	Th	4	6:50	12:40	19:04	. . .
			0.1	2.1	0.5	. . .
	F	5	0:40	7:31	13:28	19:56
			2.2	0.2	2.2	0.5
E	S	6	1:21	8:13	14:10	20:50
			2.1	0.2	2.3	0.4
☾	S	7	2:07	8:57	15:00	21:48
			2.0	0.3	2.4	0.4
	M	8	3:00	9:42	15:52	22:40
			1.9	0.3	2.5	0.3
	Tu	9	3:56	10:31	16:45	23:35
			1.8	0.3	2.6	0.2
	W	10	5:00	11:23	17:40	. . .
			1.8	0.3	2.8	. . .
	Th	11	0:28	6:01	12:16	18:33
			0.1	1.9	0.2	3.0
	F	12	1:20	7:58	13:10	19:25
			−0.1	2.0	0.1	3.1
N	S	13	2:10	7:58	14:08	20:18
			−0.2	2.1	0.0	3.2
● P	S	14	3:00	8:47	14:57	21:10
			−0.3	2.2	−0.1	3.2
	M	15	3:47	9:40	15:51	22:00
			−0.4	2.4	−0.2	3.1
	Tu	16	4:40	10:31	16:47	22:52
			−0.5	2.5	−0.2	3.0
	W	17	5:28	11:24	17:45	23:44
			−0.4	2.6	−0.2	2.8
	Th	18	6:18	12:18	18:43	. . .
			−0.3	2.6	−0.1	. . .
E	F	19	0:40	7:10	13:12	19:45
			2.6	−0.2	2.6	0.0
	S	20	1:36	8:04	14:10	20:44
			2.3	−0.1	2.6	0.1
☽	S	21	2:38	9:00	15:08	21:52
			2.1	0.0	2.6	0.3
	M	22	3:47	9:56	16:08	23:01
			1.9	0.1	2.6	0.4
	Tu	23	5:01	10:54	17:06	. . .
			1.7	0.2	2.6	. . .
	W	24	0:08	6:16	11:50	18:00
			0.4	1.7	0.2	2.6
	Th	25	1:05	7:20	12:42	18:53
			0.4	1.7	0.2	2.6
S	F	26	1:52	8:08	13:32	19:38
			0.3	1.7	0.2	2.6
	S	27	2:30	8:44	14:20	20:21
			0.2	1.8	0.2	2.6
○ A	S	28	3:05	9:14	15:01	21:01
			0.1	1.9	0.2	2.6
	M	29	3:38	9:42	15:40	21:38
			0.0	2.0	0.2	2.6
	Tu	30	4:10	10:12	16:21	22:14
			0.0	2.1	0.2	2.5
	W	31	4:54	10:44	17:01	22:49
			0.0	2.2	0.2	2.4

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	5:30	11:18	17:42	23:25
			0.0	2.3	0.3	2.3
E	F	2	6:05	11:55	18:26	. . .
			0.1	2.4	0.3	. . .
	S	3	0:01	6:41	12:38	19:15
			2.2	0.2	2.4	0.3
	S	4	0:38	7:18	13:24	20:12
			2.1	0.3	2.5	0.3
☾	M	5	1:20	8:00	14:17	21:11
			2.0	0.4	2.5	0.3
	Tu	6	2:12	8:50	15:14	22:06
			1.9	0.4	2.6	0.3
	W	7	3:15	9:52	16:15	23:08
			1.8	0.4	2.6	0.3
	Th	8	4:32	10:56	17:15	. . .
			1.8	0.3	2.7	. . .
N	F	9	0:06	5:42	12:00	18:14
			0.1	1.8	0.2	2.8
	S	10	1:00	6:46	12:59	19:10
			0.0	2.0	0.0	3.0
	S	11	1:50	7:40	13:54	20:01
			−0.2	2.2	−0.2	3.0
P ●	M	12	2:36	8:32	14:46	20:58
			−0.3	2.4	−0.3	3.1
	Tu	13	3:26	9:21	15:40	21:44
			−0.4	2.6	−0.4	3.0
	W	14	4:18	10:10	16:32	22:33
			−0.5	2.7	−0.4	2.9
E	Th	15	5:00	10:58	17:25	23:23
			−0.4	2.8	−0.3	2.7
	F	16	5:47	11:48	18:21	. . .
			−0.3	2.8	−0.2	. . .
	S	17	0:15	6:37	12:41	19:15
			2.5	−0.2	2.7	0.0
	S	18	1:09	7:30	13:36	20:16
			2.2	0.0	2.6	0.2
☽	M	19	2:10	8:27	14:35	21:25
			1.9	0.1	2.5	0.3
	Tu	20	3:23	9:28	15:38	22:30
			1.7	0.2	2.4	0.4
	W	21	4:45	10:30	16:40	23:46
			1.6	0.3	2.4	0.5
S	Th	22	6:06	11:32	17:40	. . .
			1.6	0.3	2.4	. . .
	F	23	0:42	7:07	12:30	18:33
			0.4	1.7	0.3	2.4
	S	24	1:26	7:46	13:17	19:20
			0.3	1.8	0.2	2.5
A	S	25	2:01	8:13	14:01	20:00
			0.2	1.9	0.2	2.5
	M	26	2:33	8:38	14:41	20:37
			0.1	2.0	0.1	2.5
○	Tu	27	3:05	9:06	15:18	21:12
			0.0	2.2	0.1	2.5
	W	28	3:43	9:35	15:55	21:45
			0.0	2.3	0.1	2.5
E	Th	29	4:16	10:05	16:33	22:18
			0.0	2.4	0.0	2.4
	F	30	4:50	10:38	17:14	22:50
			0.0	2.5	0.0	2.3
	S	31	5:18	11:16	17:55	23:25
			0.1	2.6	0.1	2.2

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	5:50	12:00	18:44	. . .
			0.2	2.6	0.1	. . .
	M	2	0:05	6:27	12:49	19:41
			2.1	0.3	2.6	0.2
	Tu	3	0:50	7:10	13:45	20:44
			2.0	0.4	2.6	0.2
☾	W	4	1:45	8:13	14:46	21:48
			1.8	0.5	2.5	0.3
N	Th	5	2:58	9:30	15:50	22:44
			1.7	0.4	2.5	0.2
	F	6	4:22	10:45	16:55	23:45
			1.8	0.3	2.6	0.1
	S	7	5:32	11:50	17:57	. . .
			1.9	0.1	2.7	. . .
	S	8	0:38	6:30	12:48	18:53
			0.0	2.1	−0.1	2.8
P	M	9	1:28	7:22	13:43	19:47
			−0.2	2.4	−0.3	2.8
●	Tu	10	2:17	8:10	14:35	20:37
			−0.3	2.6	−0.4	2.9
E	W	11	3:01	8:57	15:25	21:25
			−0.4	2.8	−0.5	2.8
	Th	12	3:45	9:44	16:14	22:12
			−0.4	2.9	−0.5	2.7
	F	13	4:30	10:30	17:05	22:59
			−0.4	3.0	−0.4	2.5
	S	14	5:15	11:18	17:55	23:48
			−0.2	2.9	−0.2	2.3
	S	15	6:05	12:10	18:50	. . .
			−0.1	2.8	−0.1	. . .
	M	16	0:42	6:58	13:04	19:50
			2.1	0.1	2.6	0.1
	Tu	17	1:45	7:57	14:03	20:55
			1.8	0.3	2.5	0.3
☽	W	18	3:00	9:02	15:08	22:08
S			1.7	0.4	2.3	0.4
	Th	19	4:25	10:07	16:12	23:08
			1.6	0.4	2.2	0.4
	F	20	5:40	11:12	17:15	. . .
			1.7	0.4	2.2	. . .
A	S	21	0:02	6:30	12:08	18:10
			0.4	1.8	0.3	2.2
	S	22	0:44	7:03	12:55	18:55
			0.3	1.9	0.2	2.3
	M	23	1:20	7:30	13:36	19:33
			0.2	2.1	0.1	2.3
	Tu	24	1:58	7:57	14:15	20:09
			0.1	2.2	0.1	2.4
	W	25	2:32	8:26	14:50	20:42
			0.0	2.4	0.0	2.4
E ○	Th	26	3:04	8:55	15:28	21:15
			0.0	2.5	−0.1	2.4
	F	27	3:37	9:28	16:07	21:47
			0.0	2.7	−0.1	2.3
	S	28	4:06	10:06	16:48	22:21
			0.1	2.8	−0.1	2.3
	S	29	4:37	10:46	17:32	23:00
			0.1	2.8	−0.1	2.2
	M	30	5:08	11:32	18:23	23:42
			0.2	2.8	0.0	2.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case substract it.

The time used is Eastern Standard, 75th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:40 7.4	7:46 −0.1	14:06 8.0	20:30 −0.5
	W	2	2:30 7.1	8:36 0.3	14:57 7.7	21:24 −0.1
N ☾	Th	3	3:26 6.8	9:34 0.6	15:56 7.3	22:24 0.2
	F	4	4:30 6.5	10:43 0.9	17:00 7.0	23:32 0.4
	S	5	5:41 6.4	12:00 0.9	18:10 6.8	. . . . .
	S	6	0:44 0.4	6:53 6.6	13:17 0.7	19:20 6.9
P	M	7	1:52 0.1	7:57 7.1	14:28 0.1	20:25 7.2
	Tu	8	2:52 −0.3	8:56 7.6	15:26 −0.4	21:23 7.5
E	W	9	3:45 −0.6	9:47 8.1	16:17 −0.8	22:15 7.7
●	Th	10	4:31 −0.8	10:34 8.4	17:05 −1.1	23:04 7.8
	F	11	5:16 −0.8	11:20 8.5	17:50 −1.2	23:50 7.7
	S	12	6:00 −0.7	12:04 8.5	18:37 −1.0	. . . . .
	S	13	0:35 7.5	6:43 −0.3	12:48 8.2	19:22 −0.7
	M	14	1:20 7.6	7:29 0.1	13:34 7.8	20:10 −0.3
	Tu	15	2:08 6.7	8:15 0.6	14:22 7.3	21:00 0.1
S	W	16	2:58 6.3	9:08 1.0	15:12 6.8	21:54 0.5
☽	Th	17	3:52 5.9	10:07 1.4	16:06 6.4	22:54 0.8
	F	18	4:49 5.7	11:17 1.6	17:02 6.1	23:53 1.0
A	S	19	5:50 5.7	12:30 1.5	18:01 6.0	. . . . .
	S	20	0:49 1.0	6:46 5.9	13:24 1.2	18:57 6.1
	M	21	1:34 0.8	7:30 6.3	14:08 0.9	19:46 6.3
	Tu	22	2:10 0.6	8:10 6.8	14:42 0.5	20:30 6.6
E	W	23	2:44 0.3	8:49 7.3	15:14 0.0	21:10 6.9
	Th	24	3:21 0.0	9:29 7.8	15:52 −0.4	21:49 7.3
○	F	25	4:00 −0.2	10:08 8.3	16:30 −0.8	22:29 7.6
	S	26	4:37 −0.4	10:48 8.6	17:09 −1.1	23:10 7.7
	S	27	5:16 −0.5	11:30 8.7	17:52 −1.2	23:52 7.8
	M	28	5:57 −0.5	12:12 8.6	18:35 −1.2	. . . . .
	Tu	29	0:37 7.7	6:40 −0.3	12:57 8.4	19:21 −0.9
N	W	30	1:25 7.5	7:28 0.0	13:45 8.0	20:12 −0.6
	Th	31	2:16 7.2	8:21 0.3	14:38 7.6	21:08 −0.2

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	3:15 6.9	9:25 0.7	15:38 7.1	22:08 0.2
	S	2	4:20 6.7	10:35 0.9	16:44 6.8	23:15 0.4
P	S	3	5:28 6.7	11:52 0.9	17:54 6.6	. . . . .
	M	4	0:25 0.4	6:36 6.8	13:13 0.6	19:06 6.7
E	Tu	5	1:34 0.2	7:38 7.2	14:20 0.1	20:12 6.9
	W	6	2:32 −0.1	8:36 7.7	15:14 −0.4	21:10 7.1
	Th	7	3:23 −0.3	9:27 8.0	16:02 −0.8	22:10 7.3
●	F	8	4:10 −0.4	10:11 8.3	16:50 −1.0	22:48 7.3
	S	9	4:56 −0.4	10:56 8.4	17:34 −1.0	23:32 7.3
	S	10	5:36 −0.2	11:40 8.3	18:17 −0.9	. . . . .
	M	11	0:14 7.1	6:20 0.0	12:24 8.0	19:00 −0.7
S	Tu	12	0:59 6.9	7:04 0.4	13:08 7.7	19:42 −0.3
	W	13	1:44 6.6	7:50 0.7	13:52 7.2	20:27 0.1
	Th	14	2:30 6.4	8:38 1.1	14:40 6.8	21:12 0.4
	F	15	3:16 6.2	9:29 1.3	15:28 6.4	22:00 0.7
A ☽	S	16	4:06 6.1	10:24 1.4	16:19 6.2	22:49 0.9
	S	17	4:57 6.1	11:20 1.4	17:11 6.1	23:38 1.0
	M	18	5:47 6.3	12:16 1.2	18:04 6.0	. . . . .
E	Tu	19	0:26 0.9	6:35 6.7	13:04 0.9	18:55 6.2
	W	20	1:10 0.7	7:21 7.1	13:50 0.4	19:42 6.5
	Th	21	1:55 0.4	8:07 7.6	14:33 −0.1	20:28 6.8
	F	22	2:39 0.1	8:50 8.0	15:16 −0.5	21:14 7.2
	S	23	3:22 −0.1	9:35 8.4	16:00 −0.9	22:00 7.5
○	S	24	4:05 −0.4	10:20 8.6	16:44 −1.2	22:44 7.7
	M	25	4:51 −0.5	11:05 8.7	17:30 −1.3	23:32 7.8
N	Tu	26	5:37 −0.5	11:51 8.6	18:17 −1.2	. . . . .
	W	27	0:21 7.7	6:25 −0.3	12:40 8.3	19:06 −1.0
P	Th	28	1:12 7.6	7:18 −0.1	13:30 8.0	19:58 −0.7
	F	29	2:06 7.4	8:14 0.2	14:25 7.5	20:53 −0.3
	S	30	3:05 7.1	9:18 0.5	15:25 7.1	21:52 0.0

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	4:07 7.0	10:27 0.7	16:30 6.7	22:57 0.3
E	M	2	5:10 6.9	11:43 0.7	17:40 6.4	. . . . .
	Tu	3	0:04 0.4	6:14 7.0	13:00 0.4	18:48 6.4
	W	4	1:11 0.4	7:16 7.3	14:04 0.1	19:56 6.5
	Th	5	2:10 0.2	8:12 7.6	15:00 −0.3	20:56 6.7
	F	6	3:08 0.1	9:08 7.8	15:48 −0.6	21:48 6.8
	S	7	3:51 0.1	9:50 8.0	16:34 −0.7	22:33 6.9
●	S	8	4:37 0.1	10:35 8.0	17:17 −0.8	23:17 6.9
S	M	9	5:20 0.2	11:18 8.0	17:58 −0.7	23:57 6.8
	Tu	10	6:02 0.3	12:00 7.8	18:37 −0.5	. . . . .
	W	11	0:37 6.8	6:42 0.5	12:42 7.5	19:18 −0.3
	Th	12	1:17 6.7	7:25 0.7	13:25 7.2	19:52 0.0
	F	13	1:58 6.6	8:08 0.9	14:07 6.9	20:32 0.2
A	S	14	2:41 6.6	8:52 1.0	14:50 6.6	21:12 0.5
	S	15	3:24 6.6	9:38 1.1	15:35 6.4	21:55 0.6
☽	M	16	4:10 6.6	10:28 1.0	16:20 6.2	22:41 0.7
E	Tu	17	4:57 6.8	11:19 0.9	17:10 6.2	23:28 0.7
	W	18	5:46 7.0	12:12 0.6	18:03 6.3	. . . . .
	Th	19	0:17 0.7	6:36 7.3	13:03 0.3	18:55 6.5
	F	20	1:07 0.5	7:27 7.7	13:55 −0.1	19:48 6.8
	S	21	1:58 0.3	8:15 8.0	14:45 −0.5	20:42 7.0
	S	22	2:50 0.0	9:05 8.3	15:35 −0.9	21:34 7.3
N ○	M	23	3:40 −0.2	9:55 8.5	16:23 −1.1	22:25 7.6
	Tu	24	4:32 −0.4	10:45 8.6	17:13 −1.3	23:07 7.7
P	W	25	5:23 −0.5	11:35 8.6	18:02 −1.3	. . . . .
	Th	26	0:08 7.8	6:15 −0.4	12:26 8.4	18:52 −1.1
	F	27	1:00 7.8	7:10 −0.3	13:19 8.0	19:43 −0.9
	S	28	1:55 7.7	8:07 −0.1	14:13 7.6	20:38 −0.5
	S	29	2:50 7.5	9:07 0.2	15:11 7.1	21:40 −0.1
E ☾	M	30	3:48 7.3	10:25 0.4	16:15 6.7	22:44 0.2
	Tu	31	4:54 7.2	11:40 0.5	17:28 6.4	23:52 0.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:22	7:42	14:13	20:08
			0.2	8.1	−0.5	7.1
	Tu	2	2:20	8:38	15:09	21:08
			0.0	8.3	−0.8	7.3
N	W	3	3:20	9:33	16:03	22:03
			−0.2	8.5	−1.1	7.6
☽ P	Th	4	4:15	10:28	16:56	22:58
			−0.4	8.6	−1.3	7.7
	F	5	5:10	11:22	17:47	23:57
			−0.5	8.6	−1.3	7.8
	S	6	6:05	12:13	18:38	. . .
			−0.5	8.4	−1.2	. . .
	S	7	0:47	7:00	13:07	19:31
			7.8	−0.4	8.1	−1.0
	M	8	1:39	7:57	14:01	20:25
			7.8	−0.2	7.7	−0.6
E	Tu	9	2:34	8:55	14:55	21:20
			7.6	0.0	7.2	−0.2
	W	10	3:27	9:58	15:52	22:17
			7.4	0.3	6.7	0.2
☾	Th	11	4:24	11:05	16:55	23:17
			7.2	0.5	6.3	0.6
	F	12	5:22	12:13	18:00	. . .
			7.0	0.5	6.0	. . .
	S	13	0:20	6:20	13:17	19:10
			0.8	6.9	0.5	5.8
	S	14	1:20	7:15	14:11	20:11
			0.9	6.9	0.4	5.8
	M	15	2:14	8:07	15:00	21:00
			0.9	7.0	0.2	5.9
	Tu	16	3:00	8:52	15:42	21:40
			0.9	7.1	0.1	6.1
S A	W	17	3:40	9:34	16:17	22:12
			0.8	7.3	0.0	6.3
	Th	18	4:15	10:13	16:51	22:46
			0.7	7.4	−0.1	6.6
●	F	19	4:52	10:55	17:20	23:21
			0.5	7.5	−0.3	6.9
	S	20	5:28	11:31	17:55	23:55
			0.3	7.5	−0.4	7.2
	S	21	6:04	12:09	18:30	. . .
			0.2	7.6	−0.4	. . .
	M	22	0:33	6:53	12:47	19:06
			7.4	0.0	7.6	−0.4
	Tu	23	1:12	7:23	13:26	19:44
			7.6	−0.1	7.5	−0.3
E	W	24	1:55	8:08	14:08	20:23
			7.7	−0.1	7.3	−0.2
	Th	25	2:40	8:55	14:50	21:07
			7.8	−0.1	7.2	0.0
	F	26	3:27	9:47	15:40	21:55
			7.8	0.0	7.0	0.2
☽	S	27	4:20	10:43	16:33	22:50
			7.7	0.1	6.8	0.4
	S	28	5:17	11:45	17:35	23:56
			7.6	0.1	6.6	0.5
	M	29	6:17	12:48	18:42	. . .
			7.6	0.0	6.6	. . .
	Tu	30	0:58	7:18	13:51	19:48
			0.5	7.7	−0.2	6.8
N	W	31	2:08	8:18	14:50	20:52
			0.3	7.9	−0.5	7.1

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	3:07	9:18	15:48	21:52
			0.0	8.1	−0.8	7.4
○	F	2	4:07	10:15	16:43	22:47
			−0.3	8.3	−1.1	7.8
	S	3	5:02	11:08	17:38	23:48
			−0.6	8.4	−1.2	8.0
	S	4	5:55	12:00	18:23	. . .
			−0.7	8.3	−1.2	. . .
	M	5	0:30	6:47	12:51	19:12
			8.1	−0.7	8.1	−1.0
E	Tu	6	1:19	7:38	13:40	20:00
			8.1	−0.6	7.7	−0.6
	W	7	2:07	8:30	14:32	20:50
			7.9	−0.3	7.2	−0.2
	Th	8	2:58	9:26	15:28	21:41
			7.6	0.0	6.7	0.3
☾	F	9	3:49	10:25	16 20	22:35
			7.3	0.4	6.2	0.8
	S	10	4:42	11:30	17:20	23:35
			6.9	0.7	5.8	1.1
	S	11	5:37	12:36	18:25	. . .
			6.7	0.8	5.5	. . .
	M	12	0:40	6:35	13:38	19:33
			1.3	6.6	0.7	5.5
S	Tu	13	1:41	7:42	14:28	20:23
			1.3	6.6	0.6	5.7
A	W	14	2:32	8:20	15:10	21:03
			1.1	6.8	0.4	6.0
	Th	15	3:13	9:05	15:45	21:37
			0.9	7.0	0.2	6.3
	F	16	3:30	9:47	16:17	22:13
			0.7	7.2	0.0	6.8
	S	17	4:26	10:27	16:48	22:50
			0.3	7.4	−0.3	7.2
●	S	18	5:02	11:05	17:23	23:27
			0.0	7.6	−0.5	7.6
	M	19	5:40	11:42	17:58	. . .
			−0.3	7.7	−0.6	. . .
E	Tu	20	0:04	6:18	12:20	18:34
			8.0	−0.5	7.8	−0.6
	W	21	0:43	6:58	13:00	19:11
			8.2	−0.6	7.8	−0.6
	Th	22	1:25	7:41	13:40	19:52
			8.2	−0.6	7.6	−0.4
	F	23	2:09	8:27	14:22	20:35
			8.2	−0.5	7.3	−0.1
	S	24	2:57	9:18	15:14	21:25
			8.0	−0.3	7.0	0.2
☽	S	25	3:50	10:16	16:08	22:23
			7.7	0.0	6.7	0.5
	M	26	4:48	11:19	17:13	23:30
			7.4	0.2	6.5	0.7
N	Tu	27	5:52	12:25	18:22	. . .
			7.3	0.3	6.5	. . .
	W	28	0:44	6:59	13:33	19:34
			0.7	7.3	0.1	6.6
	Th	29	1:55	8:08	14:37	20:41
			0.6	7.5	0.2	7.0

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	3:00	9:06	15:36	21:40
			0.1	7.7	−0.6	7.5
	S	2	4:00	10:08	16:28	22:31
			−0.4	8.0	−0.9	7.9
○	S	3	4:52	10:54	17:16	23:20
			−0.8	8.2	−1.1	8.3
E	M	4	5:42	11:44	18:02	. . .
			−0.9	8.2	−1.1	. . .
	Tu	5	0:07	6:30	12:30	18:47
			8.4	−1.0	8.0	−0.9
	W	6	0:52	7:16	13:18	19:32
			8.3	−0.8	7.6	−0.5
	Th	7	1:38	8:03	14:04	20:18
			8.1	−0.5	7.2	0.0
	F	8	2:24	8:53	14:52	21:06
			7.7	−0.1	6.7	0.5
	S	9	3:12	9:45	15:42	21:58
			7.3	0.4	6.1	1.0
☾	S	10	4:03	10:44	16:36	22:54
			6.8	0.7	5.8	1.4
S	M	11	4:57	11:46	17:39	23:56
			6.5	1.0	5.5	1.6
A	Tu	12	5:54	12:50	18:40	. . .
			6.3	1.0	5.5	. . .
	W	13	1:00	6:51	13:43	19:34
			1.5	6.3	0.9	5.7
	Th	14	1:54	7:44	14:26	20:18
			1.3	6.4	0.7	6.1
	F	15	2:38	8:32	15:02	20:59
			0.9	6.7	0.4	6.6
	S	16	3:17	9:16	15:36	21:38
			0.5	7.0	0.1	7.2
	S	17	3:55	9:58	16:13	22:16
			0.1	7.4	−0.3	7.7
●	M	18	4:34	10:34	16:48	22:55
			−0.4	7.7	−0.6	8.2
E	Tu	19	5:13	11:14	17:25	23:35
			−0.8	7.9	−0.7	8.5
	W	20	5:52	11:52	18:03	. . .
			−1.0	8.0	−0.8	. . .
	Th	21	0:15	6:34	12:30	18:42
			8.6	−1.1	7.9	−0.7
	F	22	0:58	7:17	13:14	19:24
			8.6	−1.0	7.8	−0.4
	S	23	1:42	8:05	14:00	20:10
			8.4	−0.7	7.4	−0.1
	S	24	2:30	8:57	14:50	21:04
			8.0	−0.4	7.1	0.3
N ☽	M	25	3:25	9:55	15:50	22:07
			7.6	0.0	6.7	0.7
	Tu	26	4:26	11:00	17:00	23:20
			7.2	0.3	6.4	0.9
	W	27	5:34	12:09	18:14	. . .
			6.9	0.4	6.4	. . .
P	Th	28	0:37	6:45	13:20	19:25
			0.9	6.9	0.2	6.6
	F	29	1:52	7:53	14:25	20:29
			0.5	7.1	−0.1	7.1
	S	30	2:57	8:55	15:21	21:24
			0.0	7.4	−0.4	7.6
	S	31	3:51	9:51	16:10	22:14
			−0.5	7.7	−0.7	8.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	APRIL. Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	MAY. Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	JUNE. Time and Height of High and Low Water.			
E ○	M	1	4:40 −0.9	10:40 7.8	16:56 −0.8	22:58 8.3	○	W	1	5:08 −0.9	11:07 7.4	17:15 −0.4	23:15 8.3	S	S	1	6:05 −0.5	12:07 6.8	18:10 0.4	. . . .
	Tu	2	5:25 −1.0	11:25 7.8	17:39 −0.8	23:42 8.4		Th	2	5:47 −0.9	11:48 7.2	17:54 −0.1	23:57 8.2		S	2	0:12 7.7	6:42 −0.4	12:44 6.7	18:50 0.6
	W	3	6:08 −1.0	12:10 7.7	18:20 −0.5	. . . . .		F	3	6:28 −0.7	12:30 7.0	18:35 0.2	. . . . .		M	3	0:52 7.5	7:21 −0.2	13:22 6.6	19:28 0.8
	Th	4	0:25 8.3	6:52 −0.8	12:52 7.8	19:04 −0.2		S	4	0:38 7.9	7:09 −0.5	13:10 6.8	19:16 0.5	A	Tu	4	1:32 7.2	8:00 0.1	14:02 6.6	20:11 0.9
	F	5	1:07 8.1	7:36 −0.5	13:36 7.0	19:47 0.3	S	S	5	1:20 7.6	7:50 −0.1	13:51 6.5	19:58 0.8		W	5	2:13 6.9	8:42 0.3	14:44 6.6	20:58 1.0
	S	6	1:52 7.7	8:20 −0.1	14:20 6.6	20:30 0.7		M	6	2:03 7.1	8:34 0.2	14:34 6.3	20:44 1.1		Th	6	2:58 6.7	9:25 0.5	15:30 6.7	21:48 1.0
	S	7	2:35 7.2	9:08 0.3	15:06 6.2	21:20 1.2	A	Tu	7	2:47 6.8	9:19 0.5	15:21 6.2	21:33 1.3	☾	F	7	3:45 6.5	10:10 0.6	16:20 6.8	22:40 0.9
S	M	8	3:24 6.8	9:59 0.7	15:58 5.9	22:13 1.5		W	8	3:35 6.4	10:06 0.7	16:08 6.1	22:28 1.4		S	8	4:34 6.4	10:58 0.6	17:11 7.0	23:35 0.7
☾ A	Tu	9	4:16 6.4	10:53 1.0	16:53 5.7	23:12 1.6	☾	Th	9	4:28 6.2	10:58 0.9	17:01 6.2	23:26 1.3	E	S	9	5:27 6.4	11:46 0.6	18:03 7.3	. . . .
	W	10	5:12 6.2	11:49 1.1	17:48 5.7	. . . .		F	10	5:21 6.2	11:48 0.8	17:54 6.5	. . . .		M	10	0:30 0.4	6:20 6.6	12:37 0.4	18:56 7.6
	Th	11	0:12 1.5	6:08 6.1	12:43 1.0	18:43 6.0		S	11	0:21 1.1	6:16 6.3	12:38 0.7	18:48 6.9		Tu	11	1:24 0.0	7:16 6.8	13:28 0.2	19:47 8.0
	F	12	1:09 1.3	7:03 6.3	13:31 0.7	19:34 6.3	E	S	12	1:14 0.6	7:07 6.5	13:26 0.4	19:37 7.4		W	12	2:15 −0.4	8:09 7.1	14:20 −0.1	20:38 8.4
	S	13	1:57 0.8	7:54 6.6	14:14 0.4	20:17 7.0		M	13	2:03 0.1	7:56 6.9	14:11 0.1	20:23 7.9		Th	13	3:06 −0.8	9:02 7.4	15:11 −0.3	21:30 8.6
	S	14	2:40 0.3	8:40 6.9	14:54 0.1	21:01 7.6		Tu	14	2:49 −0.4	8:44 7.2	14:56 −0.2	21:09 8.4		F	14	3:56 −1.1	9:54 7.6	16:02 −0.5	22:19 8.8
E	M	15	3:22 −0.2	9:22 7.3	15:35 −0.3	21:42 8.1		W	15	3:35 −0.9	9:30 7.6	15:40 −0.5	21:54 8.7	● N	S	15	4:46 −1.3	10:47 7.8	16:54 −0.6	23:09 8.7
	Tu	16	4:03 −0.7	10:01 7.7	16:14 −0.6	22:24 8.6	●	Th	16	4:19 −1.2	10:18 7.8	16:25 −0.6	22:40 8.9	P	S	16	5:35 −1.4	11:38 7.8	17:47 −0.5	. . . .
●	W	17	4:45 −1.1	10:44 7.9	16:54 −0.7	23:06 8.8		F	17	5:05 −1.4	11:04 7.9	17:11 −0.7	23:28 8.9		M	17	0:00 8.6	6:26 −1.2	12:30 7.8	18:42 −0.4
	Th	18	5:28 −1.3	11:26 8.0	17:34 −0.8	23:49 8.8		S	18	5:52 −1.4	11:51 7.9	18:00 −0.5	. . . .		Tu	18	0:52 8.3	7:19 −1.0	13:24 7.7	19:38 −0.1
	F	19	6:11 −1.3	12:10 7.9	18:18 −0.6	. . . .	N P	S	19	0:15 8.7	6:41 −1.2	12:43 7.7	18:50 −0.3		W	19	1:45 7.9	8:13 −0.7	14:20 7.5	20:38 0.1
	S	20	0:34 8.7	6:58 −1.2	12:57 7.8	19:03 −0.3		M	20	1:04 8.3	7:32 −0.9	13:34 7.5	19:45 0.0		Th	20	2:41 7.4	9:10 −0.3	15:18 7.3	21:43 0.4
	S	21	1:21 8.4	7:47 −0.8	13:46 7.4	19:54 0.0		Tu	21	1:57 7.9	8:26 −0.5	14:31 7.2	20:47 0.4	☽ E	F	21	3:42 6.9	10:09 0.1	16:18 7.1	22:51 0.5
N P	M	22	2:11 7.9	8:40 −0.4	14:40 7.1	20:52 0.4		W	22	2:54 7.3	9:25 −0.1	15:32 6.9	21:54 0.7		S	22	4:45 6.5	11:12 0.3	17:20 7.1	. . . .
	Tu	23	3:07 7.4	9:40 0.0	15:42 6.7	22:00 0.8	☽	Th	23	3:57 6.9	10:29 0.2	16:39 6.8	23:08 0.8		S	23	0:05 0.5	5:52 6.3	12:15 0.5	18:22 7.1
☽	W	24	4:10 7.0	10:44 0.3	16:50 6.5	23:15 1.0		F	24	5:04 6.6	11:36 0.4	17:46 6.8	. . . .		M	24	1:14 0.3	7:02 6.2	13:20 0.6	19:21 7.2
	Th	25	5:20 6.7	11:54 0.5	18:01 6.6	. . . .	E	S	25	0:26 0.7	6:15 6.4	12:44 0.4	18:51 7.0		Tu	25	2:12 0.1	8:08 6.2	14:16 0.6	20:14 7.4
	F	26	0:35 0.8	6:32 6.6	13:05 0.3	19:12 6.8		S	26	1:37 0.3	7:25 6.5	13:46 0.3	19:49 7.3		W	26	3:04 −0.1	9:04 6.3	15:06 0.5	21:03 7.5
	S	27	1:49 0.4	7:40 6.8	14:08 0.1	20:12 7.3		M	27	2:33 −0.1	8:28 6.6	14:40 0.1	20:40 7.6		Th	27	3:50 −0.3	9:50 6.4	15:50 0.5	21:48 7.6
E	S	28	2:48 −0.1	8:42 7.0	15:08 −0.2	21:04 7.7		Tu	28	3:23 −0.4	9:22 6.8	15:28 0.1	21:27 7.9	S	F	28	4:30 −0.4	10:31 6.5	16:30 0.5	22:28 7.7
	M	29	3:40 −0.5	9:36 7.2	15:50 −0.4	21:50 8.1		W	29	4:08 −0.6	10:07 6.8	16:10 0.1	22:10 8.0	○	S	29	5:08 −0.4	11:06 6.6	17:08 0.5	23:08 7.6
	Tu	30	4:24 −0.8	10:22 7.4	16:32 −0.4	22:34 8.3	○	Th	30	4:50 −0.7	10:46 6.9	16:50 0.1	22:50 8.0		S	30	5:41 −0.4	11:41 6.7	17:47 0.5	23:48 7.6
								F	31	5:28 −0.7	11:27 6.8	17:30 0.2	23:30 7.9							

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
JULY.						
A	M	1	6:16	12:17	18:24	. . .
			−0.3	6.8	0.5	. . .
	Tu	2	0:26	6:51	12:54	19:01
			7.4	−0.2	6.9	0.5
	W	3	1:04	7:28	13:30	19:40
			7.3	−0.1	7.1	0.5
	Th	4	1:42	8:05	14:11	20:28
			7.1	0.0	7.2	0.5
	F	5	2:22	8:44	14:54	21:08
			7.0	0.1	7.2	0.5
E	S	6	3:05	9:25	15:40	21:59
			6.8	0.3	7.3	0.4
☾	S	7	3:51	10:10	16:30	22:53
			6.7	0.4	7.4	0.3
	M	8	4:40	10:59	17:24	23:49
			6.6	0.4	7.5	0.2
	Tu	9	5:37	11:53	18:18	. . .
			6.6	0.4	7.7	. . .
	W	10	0:47	6:36	12:51	19:15
			0.0	6.7	0.3	7.9
	Th	11	1:45	7:37	13:51	20:10
			−0.3	6.9	0.2	8.1
	F	12	2:42	8:37	14:50	21:07
			−0.6	7.2	−0.1	8.3
N	S	13	3:37	9:34	15:48	22:00
			−0.9	7.5	−0.3	8.5
● P	S	14	4:29	10:30	16:43	22:55
			−1.2	7.7	−0.5	8.6
	M	15	5:20	11:25	17:38	23:47
			−1.3	7.9	−0.6	8.5
	Tu	16	6:11	12:17	18:32	. . .
			−1.3	8.0	−0.6	. . .
	W	17	0:40	7:02	13:10	19:27
			8.3	−1.1	8.0	−0.5
	Th	18	1:32	7:54	14:03	20:22
			7.9	−0.8	7.9	−0.3
E	F	19	2:26	8:47	14:57	21:22
			7.5	−0.4	7.7	0.0
	S	20	3:18	9:42	15:52	22:27
			7.0	0.0	7.4	0.3
☽	S	21	4:18	10:40	16:50	23:35
			6.5	0.4	7.1	0.5
	M	22	5:21	11:45	17:50	. . .
			6.1	0.7	7.0	. . .
	Tu	23	0:45	6:35	12:50	18:50
			0.5	5.9	0.9	6.9
	W	24	1:48	7:45	13:53	19:47
			0.4	5.8	0.9	7.0
	Th	25	2:43	8:46	14:48	20:38
			0.2	6.0	0.8	7.1
S	F	26	3:29	9:32	15:32	21:24
			0.0	6.1	0.7	7.2
	S	27	4:10	10:08	16:13	22:05
			−0.1	6.3	0.6	7.3
○ A	S	28	4:44	10:40	16:47	22:44
			−0.2	6.5	0.5	7.4
	M	29	5:15	11:08	17:22	23:22
			−0.2	6.3	0.4	7.4
	Tu	30	5:45	11:47	17:57	23:59
			−0.3	7.1	0.2	7.5
	W	31	6:20	12:21	18:33	. . .
			−0.3	7.4	0.1	. . .
AUGUST.						
	Th	1	0:35	6:58	12:59	19:10
			7.5	−0.3	7.6	0.0
E	F	2	1:10	7:28	13:38	19:50
			7.4	−0.3	7.7	−0.1
	S	3	1:50	8:04	14:20	20:30
			7.3	−0.2	7.7	−0.1
	S	4	2:32	8:45	15:04	21:28
			7.1	0.0	7.7	0.0
☾	M	5	3:14	9:30	15:53	22:15
			7.0	0.2	7.6	0.1
	Tu	6	4:06	10:20	16:47	23:18
			6.8	0.4	7.6	0.1
	W	7	5:02	11:20	17:45	. . .
			6.6	0.5	7.5	. . .
	Th	8	0:16	6:07	12:24	18:47
			0.1	6.6	0.6	7.6
N	F	9	1:19	7:14	13:32	19:49
			−0.1	6.7	0.4	7.7
	S	10	2:21	8:20	14:37	20:50
			−0.3	7.0	0.1	8.0
	S	11	3:19	9:20	15:38	21:47
			−0.7	7.4	−0.3	8.2
P ●	M	12	4:18	10:18	16:34	22:42
			−1.0	7.8	−0.6	8.4
	Tu	13	5:05	11:10	17:27	23:38
			−1.2	8.1	−0.9	8.4
	W	14	5:55	12:01	18:19	. . .
			−1.3	8.3	−0.9	. . .
E	Th	15	0:25	6:43	12:50	19:10
			8.3	−1.2	8.3	−0.8
	F	16	1:15	7:32	13:40	20:02
			8.0	−0.9	8.2	−0.6
	S	17	2:04	8:21	14:31	20:56
			7.5	−0.4	7.9	−0.3
	S	18	2:55	9:13	15:22	21:50
			7.0	0.1	7.5	0.2
☽	M	19	3:50	10:08	16:17	23:00
			6.4	0.6	7.1	0.5
	Tu	20	4:51	11:10	17:13	. . .
			6.0	1.0	6.8	. . .
	W	21	0:10	6:00	12:19	18:15
			0.7	5.7	1.3	6.6
S	Th	22	1:18	7:17	13:30	19:17
			0.7	5.6	1.2	6.6
	F	23	2:14	8:19	14:28	20:12
			0.5	5.8	1.1	6.7
	S	24	3:02	9:02	15:14	21:00
			0.4	6.0	0.8	6.8
A	S	25	3:40	9:35	15:50	21:40
			0.2	6.3	0.6	7.0
	M	26	4:18	10:05	16:21	22:17
			0.0	6.7	0.4	7.2
○	Tu	27	4:42	10:38	16:55	22:55
			−0.1	7.1	0.1	7.4
	W	28	5:12	11:15	17:30	23:30
			−0.3	7.5	−0.2	7.5
E	Th	29	5:45	11:50	18:05	. . .
			−0.4	7.9	−0.4	. . .
	F	30	0:05	6:18	12:26	18:42
			7.6	−0.5	8.1	−0.6
	S	31	0:41	6:58	13:05	19:22
			7.7	−0.5	8.2	−0.6
SEPTEMBER.						
	S	1	1:18	7:30	13:47	20:05
			7.6	−0.4	8.2	−0.5
	M	2	2:00	8:11	14:32	20:53
			7.4	−0.1	8.0	−0.3
	Tu	3	2:44	8:58	15:22	21:47
			7.1	0.1	7.7	−0.1
☾	W	4	3:39	9:51	16:17	22:46
			6.8	0.5	7.5	0.1
N	Th	5	4:38	10:55	17:18	23:59
			6.6	0.7	7.7	0.2
	F	6	5:47	12:08	18:25	. . .
			6.5	0.7	7.2	. . .
	S	7	0:59	6:58	13:20	19:31
			0.2	6.6	0.6	7.3
	S	8	2:02	8:05	14:28	20:35
			−0.1	7.0	0.2	7.6
P	M	9	3:04	9:07	15:29	21:33
			−0.5	7.5	−0.3	7.9
●	Tu	10	3:57	10:02	16:23	22:26
			−0.8	8.0	−0.3	8.1
E	W	11	4:47	10:51	17:15	23.15
			−1.1	8.3	−1.0	8.2
	Th	12	5:35	11:40	18:02	. . .
			−1.2	8.5	−1.2	. . .
	F	13	0:05	6:21	12:28	18:50
			8.1	−1.0	8.5	−1.0
	S	14	0:53	7:07	13:15	19:40
			7.8	−0.7	8.3	−0.8
	S	15	1:40	7:54	14:01	20:30
			7.4	−0.3	8.0	−0.4
	M	16	2:28	8:43	14:50	21:23
			6.9	0.3	7.5	0.1
	Tu	17	3:20	9:37	15:43	22:22
			6.4	0.3	7.0	0.5
☽ S	W	18	4:18	10:36	16:38	23:30
			5.9	1.3	6.6	0.8
	Th	19	5:22	11:45	17:37	. . .
			5.6	1.5	6.3	. . .
	F	20	0:36	6:33	12:57	18:40
			0.9	5.5	1.5	6.2
A	S	21	1:35	7:34	13:59	19:37
			0.8	5.7	1.2	63.
	S	22	2:23	8:17	14:41	20:25
			0.6	6.1	0.9	6.5
	M	23	3:00	8:50	15:19	21:05
			0.4	6.5	0.6	6.8
	Tu	24	3:30	9:25	15:50	21:45
			0.2	7.0	0.2	7.1
	W	25	4:03	10:08	16:23	22:22
			−0.1	7.5	−0.2	7.4
E ○	Th	26	4:35	10:40	17:00	22:22
			−0.3	8.0	−0.6	7.6
	F	27	5:10	11:17	17:37	23:34
			−0.5	8.3	−0.8	7.8
	S	28	5:44	11:56	18:15	. . .
			−0.6	8.5	−1.0	. . .
	S	29	0:12	6:21	12:36	18:57
			7.8	−0.6	8.5	−1.0
	M	30	0:55	7:01	13:20	19:41
			7.7	−0.4	8.4	−0.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	1:40 7.4	7:46 −0.1	14:06 8.0	20:30 −0.5
	W	2	2:30 7.1	8:36 0.3	14:57 7.7	21:24 −0.1
N ☾	Th	3	3:26 6.8	9:34 0.6	15:55 7.3	22:24 0.2
	F	4	4:30 6.5	10:43 0.9	17:00 7.0	23:32 0.4
	S	5	5:41 6.4	12:00 0.9	18:10 6.8	. . . . .
	S	6	0:44 0.4	6:58 6.6	13:17 0.7	19:20 6.9
P	M	7	1:52 0.1	7:57 7.1	14:28 0.1	20:25 7.2
	Tu	8	2:52 −0.3	8:56 7.6	15:26 −0.4	21:23 7.5
E	W	9	3:45 −0.6	9:47 8.1	16:17 −0.8	22:15 7.7
●	Th	10	4:31 −0.8	10:34 8.4	17:05 −1.1	23:04 7.8
	F	11	5:16 −0.8	11:20 8.5	17:50 −1.2	23:50 7.7
	S	12	6:00 −0.7	12:04 8.5	18:37 −1.0	. . . . .
	S	13	0:35 7.5	6:48 −0.3	12:48 8.2	19:22 −0.7
	M	14	1:20 7.6	7:29 0.1	13:34 7.8	20:10 −0.3
	Tu	15	2:08 6.7	8:15 0.6	14:22 7.3	21:00 0.1
S	W	16	2:58 6.3	9:06 1.0	15:12 6.8	21:54 0.5
☽	Th	17	3:52 5.9	10:07 1.4	16:06 6.4	22:54 0.8
	F	18	4:49 5.7	11:17 1.6	17:02 6.1	23:58 1.0
A	S	19	5:50 5.7	12:30 1.5	18:01 6.0	. . . . .
	S	20	0:49 1.0	6:46 5.9	13:24 1.2	18:57 6.1
	M	21	1:34 0.8	7:30 6.3	14:08 0.9	19:46 6.3
	Tu	22	2:10 0.6	8:10 6.8	14:42 0.5	20:30 6.6
E	W	23	2:44 0.3	8:49 7.3	15:14 0.0	21:10 6.9
	Th	24	3:21 0.0	9:29 7.8	15:52 −0.4	21:49 7.3
○	F	25	4:00 −0.2	10:06 8.3	16:30 −0.8	22:29 7.6
	S	26	4:37 −0.4	10:48 8.6	17:09 −1.1	23:10 7.7
	S	27	5:16 −0.5	11:30 8.7	17:52 −1.2	23:52 7.8
	M	28	5:57 −0.5	12:12 8.6	18:35 −1.2	. . . . .
	Tu	29	0:37 7.7	6:40 −0.3	12:57 8.4	19:21 −0.9
N	W	30	1:25 7.5	7:28 0.0	13:45 8.0	20:12 −0.6
	Th	31	2:16 7.2	8:21 0.3	14:38 7.6	21:08 −0.2
NOVEMBER.						
☾	F	1	3:15 6.9	9:25 0.7	15:38 7.1	22:08 0.2
	S	2	4:20 6.7	10:35 0.9	16:44 6.8	23:15 0.4
P	S	3	5:28 6.7	11:52 0.9	17:54 6.6	. . . . .
	M	4	0:25 0.4	6:36 6.8	13:13 0.6	19:06 6.7
E	Tu	5	1:34 0.2	7:38 7.2	14:20 0.1	20:12 6.9
	W	6	2:32 −0.1	8:36 7.7	15:14 −0.4	21:10 7.1
	Th	7	3:28 −0.3	9:27 8.0	16:02 −0.8	22:10 7.3
●	F	8	4:10 −0.4	10:11 8.3	16:50 −1.0	22:48 7.3
	S	9	4:56 −0.4	10:56 8.4	17:34 −1.0	23:32 7.3
	S	10	5:36 −0.2	11:40 8.3	18:17 −0.9	. . . . .
	M	11	0:14 7.1	6:20 0.0	12:24 8.0	19:00 −0.7
S	Tu	12	0:59 6.9	7:04 0.4	13:08 7.7	19:42 −0.3
	W	13	1:44 6.6	7:50 0.7	13:52 7.2	20:27 0.1
	Th	14	2:30 6.4	8:38 1.1	14:40 6.8	21:12 0.4
	F	15	3:16 6.2	9:29 1.3	15:28 6.4	22:00 0.7
A ☽	S	16	4:06 6.1	10:24 1.4	16:19 6.2	22:49 0.9
	S	17	4:57 6.1	11:20 1.4	17:11 6.1	23:38 1.0
	M	18	5:47 6.3	12:16 1.2	18:04 6.0	. . . . .
E	Tu	19	0:26 0.9	6:35 6.7	13:04 0.9	18:55 6.2
	W	20	1:10 0.7	7:21 7.1	13:50 0.4	19:42 6.5
	Th	21	1:55 0.4	8:07 7.6	14:33 −0.1	20:28 6.8
	F	22	2:39 0.1	8:50 8.0	15:16 −0.5	21:14 7.2
	S	23	3:22 −0.1	9:35 8.4	16:00 −0.9	22:00 7.5
○	S	24	4:05 −0.4	10:20 8.6	16:44 −1.2	22:44 7.7
	M	25	4:51 −0.5	11:05 8.7	17:30 −1.3	23:32 7.8
N	Tu	26	5:37 −0.5	11:51 8.6	18:17 −1.2	. . . . .
	W	27	0:21 7.7	6:25 −0.3	12:40 8.3	19:06 −1.0
P	Th	28	1:12 7.6	7:18 −0.1	13:30 8.0	19:58 −0.7
	F	29	2:06 7.4	8:14 0.2	14:25 7.5	20:53 −0.3
	S	30	3:05 7.1	9:18 0.5	15:25 7.1	21:52 0.0
DECEMBER.						
☾	S	1	4:07 7.0	10:27 0.7	16:30 6.7	22:57 0.3
E	M	2	5:10 6.9	11:43 0.7	17:40 6.4	. . . . .
	Tu	3	0:04 0.4	6:14 7.0	13:00 0.4	18:48 6.4
	W	4	1:11 0.4	7:16 7.3	14:04 0.1	19:56 6.5
	Th	5	2:10 0.2	8:12 7.6	15:00 −0.3	20:56 6.7
	F	6	3:08 0.1	9:08 7.8	15:48 −0.6	21:48 6.8
	S	7	3:51 0.1	9:50 8.0	16:34 −0.7	22:33 6.9
●	S	8	4:37 0.1	10:35 8.0	17:17 −0.8	23:17 6.9
S	M	9	5:20 0.2	11:18 8.0	17:58 −0.7	23:57 6.8
	Tu	10	6:02 0.3	12:00 7.8	18:37 −0.5	. . . . .
	W	11	0:37 6.8	6:42 0.5	12:42 7.5	19:18 −0.3
	Th	12	1:17 6.7	7:25 0.7	13:25 7.2	19:52 0.0
	F	13	1:58 6.6	8:08 0.9	14:07 6.9	20:32 0.2
A	S	14	2:41 6.6	8:52 1.0	14:50 6.6	21:12 0.5
	S	15	3:24 6.6	9:38 1.1	15:35 6.4	21:55 0.6
☽	M	16	4:10 6.6	10:28 1.0	16:20 6.2	22:41 0.7
E	Tu	17	4:57 6.8	11:19 0.9	17:10 6.2	23:28 0.7
	W	18	5:46 7.0	12:12 0.6	18:03 6.8	. . . . .
	Th	19	0:17 0.7	6:36 7.8	13:03 0.3	18:55 6.5
	F	20	1:07 0.5	7:27 7.7	13:55 −0.1	19:48 6.8
	S	21	1:58 0.3	8:15 8.0	14:45 −0.5	20:42 7.0
	S	22	2:50 0.0	9:05 8.3	15:35 −0.9	21:34 7.3
N ○	M	23	3:40 −0.2	9:55 8.5	16:23 −1.1	22:25 7.6
	Tu	24	4:32 −0.4	10:45 8.6	17:13 −1.3	23:07 7.7
P	W	25	5:23 −0.5	11:35 8.6	18:02 −1.3	. . . . .
	Th	26	0:08 7.8	6:15 −0.4	12:26 8.4	18:52 −1.1
	F	27	1:00 7.8	7:10 −0.3	13:19 8.0	19:43 −0.9
	S	28	1:55 7.7	8:07 −0.1	14:13 7.6	20:38 −0.5
	S	29	2:50 7.5	9:07 0.2	15:11 7.1	21:40 −0.1
E ☾	M	30	3:48 7.3	10:25 0.4	16:15 6.7	22:44 0.2
	Tu	31	4:54 7.2	11:40 0.5	17:28 6.4	23:52 0.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
JANUARY.						
	M	1	4:42 4.9	11:28 0.0	16:58 4.0	23:23 0.0
	Tu	2	5:38 5.1	12:24 −0.3	18:01 4.1	. . . . .
N	W	3	0:18 −0.1	6:33 4.3	13:16 −0.5	19:01 4.2
○ P	Th	4	1:14 −0.2	7:26 5.4	14:08 −0.7	20:00 4.3
	F	5	2:10 −0.3	8:18 5.4	15:00 −0.8	20:56 4.4
	S	6	3:05 −0.2	9:11 5.3	15:52 −0.8	21:52 4.4
	S	7	4:01 −0.2	10:04 5.1	16:45 −0.7	22:48 4.4
	M	8	5:00 0.0	10:58 4.8	17:37 −0.5	23:45 4.3
E	Tu	9	6:00 0.2	11:55 4.5	18:32 −0.3	. . . . .
	W	10	0:43 4.3	7:06 0.3	12:57 4.2	19:28 −0.1
☾	Th	11	1:42 4.2	8:13 0.4	14:01 3.8	20:26 0.1
	F	12	2:40 4.2	9:18 0.5	15:09 3.6	21:22 0.2
	S	13	3:37 4.2	10:20 0.5	16:17 3.5	22:18 0.3
	S	14	4:30 4.3	11:10 0.5	17:18 3.5	23:08 0.3
	M	15	5:18 4.4	12:00 0.4	18:10 3.5	23:54 0.3
	Tu	16	6:02 4.5	12:45 0.3	18:52 3.5	. . . . .
S A	W	17	0:37 0.3	6:40 4.5	13:26 0.1	19:26 3.5
	Th	18	1:14 0.4	7:16 4.6	14:02 0.0	19:54 3.6
●	F	19	1:50 0.4	7:50 4.6	14:34 0.0	20:18 3.7
	S	20	2:20 0.5	8:20 4.6	15:06 0.0	20:42 3.8
	S	21	2:50 0.5	8:50 4.6	15:37 0.0	21:10 4.0
	M	22	3:21 0.5	9:22 4.6	16:06 0.0	21:47 4.2
	Tu	23	3:58 0.4	10:00 4.5	16:38 0.0	22:28 4.4
E	W	24	4:38 0.4	10:38 4.4	17:11 0.1	23:13 4.5
	Th	25	5:28 0.5	11:20 4.3	17:50 0.2	. . . . .
	F	26	0:04 4.5	6:24 0.5	12:07 4.1	18:37 0.3
☽	S	27	1:00 4.5	7:30 0.6	13:02 3.9	19:37 0.4
	S	28	2:08 4.5	8:49 0.6	14:06 3.7	20:45 0.5
	M	29	3:12 4.5	10:05 0.5	15:22 3.7	22:01 0.4
	Tu	30	4:20 4.7	11:12 0.2	16:46 3.7	23:10 0.2
N	W	31	5:23 4.9	12:11 −0.2	18:00 4.0	. . . . .

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
FEBRUARY.						
P	Th	1	0:12 −0.1	6:21 5.1	13:04 −0.5	19:00 4.3
○	F	2	1:10 −0.3	7:17 5.3	13:54 −0.8	19:55 4.5
	S	3	2:03 −0.5	8:09 5.4	14:44 −0.9	20:45 4.7
	S	4	2:55 −0.5	8:58 5.4	15:30 −1.0	21:35 4.8
	M	5	3:47 −0.5	9:48 5.2	16:20 −0.9	22:24 4.8
E	Tu	6	4:40 −0.3	10:38 4.9	17:08 −0.6	23:12 4.7
	W	7	5:33 −0.1	11:28 4.5	17:56 −0.3	. . . . .
	Th	8	0:02 4.5	6:31 0.2	12:20 4.1	18:49 0.1
☾	F	9	0:56 4.3	7:35 0.4	13:21 3.7	19:44 0.4
	S	10	1:54 4.1	8:42 0.6	14:32 3.3	20:45 0.6
	S	11	2:56 4.0	9:48 0.7	15:51 3.2	21:46 0.6
	M	12	3:56 4.0	10:44 0.8	17:00 3.2	22:42 0.7
S	Tu	13	4:50 4.1	11:34 0.6	17:54 3.3	23:33 0.6
A	W	14	5:38 4.2	12:21 0.5	18:34 3.4	. . . . .
	Th	15	0:16 0.5	6:19 4.3	13:01 0.2	19:04 3.5
	F	16	0:57 0.4	6:55 4.4	13:33 0.1	19:28 3.7
	S	17	1:30 0.3	7:26 4.5	14:04 −0.1	19:51 3.9
●	S	18	2:02 0.2	7:57 4.6	14:32 −0.2	20:17 4.2
	M	19	2:32 0.2	8:28 4.7	15:02 −0.2	20:46 4.5
E	Tu	20	3:05 0.1	8:58 4.7	15:30 −0.2	21:21 4.7
	W	21	3:40 0.0	9:33 4.7	16:00 −0.1	22:00 4.8
	Th	22	4:18 0.1	10:10 4.6	16:31 −0.1	22:44 4.8
	F	23	5:05 0.2	10:51 4.4	17:12 0.1	23:32 4.7
	S	24	5:57 0.3	11:38 4.1	18:00 0.3	. . . . .
☽	S	25	0:26 4.6	7:02 0.5	12:32 3.9	18:58 0.6
	M	26	1:30 4.4	8:24 0.7	13:40 3.6	20:19 0.7
N	Tu	27	2:45 4.3	9:48 0.6	15:12 3.4	21:50 0.6
	W	28	4:02 4.4	10:58 0.2	16:48 3.6	23:06 0.3
	Th	29	5:13 4.7	11:58 −0.2	17:58 4.0	. . . . .

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
MARCH.						
P	F	1	0:09 −0.1	6:12 4.9	12:49 −0.5	18:51 4.4
	S	2	1:02 −0.4	7:07 5.2	13:36 −0.8	19:40 4.8
○	S	3	1:53 −0.7	7:56 5.3	14:22 −1.0	20:26 5.0
E	M	4	2:41 −0.8	8:42 5.3	15:06 −1.0	21:10 5.1
	Tu	5	3:28 −0.7	9:28 5.1	15:51 −0.8	21:54 5.1
	W	6	4:16 −0.5	10:12 4.8	16:33 −0.5	22:38 4.9
	Th	7	5:05 −0.2	10:58 4.4	17:20 −0.1	23:22 4.6
	F	8	5:58 0.1	11:42 3.9	18:06 0.3	. . . . .
	S	9	0:09 4.3	6:56 0.4	12:36 3.5	18:59 0.6
☾	S	10	1:02 4.0	8:00 0.7	13:44 3.2	20:01 0.9
S	M	11	2:04 3.8	9:06 0.8	15:12 3.0	21:10 1.0
A	Tu	12	3:12 3.7	10:13 0.8	16:29 3.0	22:13 0.9
	W	13	4:13 3.8	11:05 0.7	17:22 3.2	23:06 0.8
	Th	14	5:06 3.9	11:50 0.5	17:58 3.4	23:52 0.6
	F	15	5:48 4.1	12:26 0.3	18:25 3.7	. . . . .
	S	16	0:31 0.4	6:27 4.2	12:58 0.1	18:58 4.0
	S	17	1:08 0.2	6:58 4.5	13:29 −0.1	19:20 4.3
●	M	18	1:40 0.0	7:30 4.6	13:58 −0.2	19:49 4.6
E	Tu	19	2:13 −0.1	8:00 4.7	14:25 −0.3	20:21 4.9
	W	20	2:48 −0.2	8:33 4.7	14:54 −0.3	20:58 5.1
	Th	21	3:24 −0.2	9:10 4.7	15:26 −0.2	21:38 5.1
	F	22	4:05 −0.2	9:50 4.6	16:08 −0.1	22:20 5.0
	S	23	4:50 0.0	10:31 4.3	16:44 0.2	23:08 4.8
	S	24	5:44 0.2	11:18 4.1	17:33 0.4	. . . . .
N ☽	M	25	0:01 4.6	6:50 0.5	12:16 3.8	18:38 0.7
	Tu	26	1:06 4.3	8:11 0.6	13:32 3.5	20:13 0.9
	W	27	2:25 4.1	9:33 0.5	15:21 3.4	21:48 0.8
P	Th	28	3:50 4.1	10:41 0.2	16:45 3.8	23:00 0.3
	F	29	5:00 4.4	11:40 −0.1	17:45 4.2	. . . . .
	S	30	0:00 −0.1	6:00 4.7	12:28 −0.5	18:35 4.6
	S	31	0:51 −0.4	6:52 4.9	13:15 −0.7	19:22 5.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m) and when diminished by 12 give the times afternoon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	1:38 −0.7	7:40 5.0	13:58 0.8	20:08 5.2
	Tu	2	2:24 −0.8	8:24 5.0	14:40 −0.8	20:44 5.3
	W	3	3:08 −0.7	9:08 4.8	15:20 −0.6	21:24 5.2
	Th	4	3:53 −0.6	9:48 4.5	16:02 −0.3	22:03 5.0
	F	5	4:40 −0.3	10:29 4.2	16:42 −0.1	22:45 4.7
	S	6	5:27 0.0	11:10 3.8	17:24 0.5	23:27 4.4
	S	7	6:20 0.4	11:54 3.4	18:12 0.9	. . . . .
S	M	8	0:12 4.1	7:17 0.6	12:50 3.1	19:10 1.2
☾ A	Tu	9	1:04 3.8	8:18 0.8	14:08 3.0	20:22 1.2
	W	10	2:06 3.6	9:20 0.8	15:25 3.0	21:31 1.1
	Th	11	3:14 3.6	10:14 0.7	16:20 3.2	22:28 0.9
	F	12	4:12 3.6	10:58 0.6	17:00 3.5	23:17 0.7
	S	13	5:01 3.8	11:37 0.3	17:36 3.8	23:58 0.4
	S	14	5:43 4.0	12:13 0.2	18:08 4.2	. . . . .
E	M	15	0:37 0.2	6:21 4.2	12:47 0.0	18:43 4.6
	Tu	16	1:15 −0.1	6:58 4.4	13:20 −0.2	19:19 5.0
●	W	17	1:54 −0.3	7:33 4.5	13:54 −0.3	19:57 5.2
	Th	18	2:31 −0.4	8:10 4.6	14:29 −0.2	20:37 5.3
	F	19	3:12 −0.4	8:52 4.5	15:05 −0.1	21:18 5.2
	S	20	3:57 −0.3	9:35 4.4	15:45 0.0	22:04 5.1
	S	21	4:40 −0.2	10:20 4.2	16:30 0.3	22:52 4.8
N P	M	22	5:40 0.1	11:15 3.9	17:27 0.6	23:48 4.5
	Tu	23	6:47 0.3	12:20 3.7	18:43 0.8	. . . . .
☽	W	24	0:53 4.2	8:00 0.4	13:50 3.5	20:17 0.8
	Th	25	2:13 4.0	9:12 0.3	15:20 3.6	21:41 0.6
	F	26	3:35 4.0	10:16 0.1	16:30 4.0	22:50 0.3
	S	27	4:44 4.2	11:13 −0.1	17:25 4.4	23:46 −0.1
E	S	28	5:42 4.4	12:02 −0.4	18:10 4.7	. . . . .
	M	29	0:37 −0.3	6:34 4.5	12:50 −0.5	18:55 5.0
	Tu	30	1:24 −0.5	7:20 4.6	13:32 −0.6	19:37 5.2

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	2:07 −0.6	8:05 4.5	14:16 −0.5	20:17 5.2
	Th	2	4:51 −0.6	8:47 4.4	14:54 −0.3	20:55 5.1
	F	3	3:55 −0.5	9:27 4.1	15:33 0.0	21:33 4.9
	S	4	4:17 −0.2	10:05 3.9	16:10 0.3	22:12 4.7
S	S	5	5:02 0.0	10:42 3.7	16:48 0.6	22:48 4.4
	M	6	5:27 0.3	11:20 3.4	17:28 1.0	23:28 4.1
A	Tu	7	6:35 0.5	12:02 3.3	18:17 1.2	. . . . .
	W	8	0:12 3.9	7:26 0.6	12:54 3.2	19:18 1.3
☾	Th	9	1:00 3.7	8:17 0.7	13:58 3.2	20:28 1.2
	F	10	2:00 3.6	9:07 0.7	14:58 3.4	21:33 1.0
	S	11	3:00 3.6	9:55 0.6	15:51 3.7	22:28 0.8
E	S	12	3:57 3.7	10:38 0.4	16:38 4.1	23:18 0.5
	M	13	4:47 3.9	11:20 0.2	17:23 4.5	. . . . .
	Tu	14	0:02 0.2	5:35 4.0	12:02 0.0	18:08 4.8
	W	15	0:50 −0.1	6:21 4.2	12:43 −0.1	18:51 5.1
●	Th	16	1:32 −0.3	7:07 4.3	13:25 −0.2	19:35 5.3
	F	17	2:17 −0.5	7:52 4.4	14:09 −0.2	20:20 5.3
	S	18	3:03 −0.5	8:40 4.3	14:53 −0.1	21:06 5.3
N P	S	19	3:51 −0.5	9:30 4.2	15:41 0.1	21:55 5.1
	M	20	4:43 −0.3	10:24 4.1	16:34 0.3	22:46 4.8
	Tu	21	5:39 −0.2	11:23 3.9	17:40 0.5	23:44 4.5
	W	22	6:39 0.0	12:35 3.8	18:54 0.7	. . . . .
☽	Th	23	0:47 4.2	7:43 0.1	13:50 3.8	20:12 0.6
	F	24	2:00 4.0	8:46 0.1	15:00 3.9	21:25 0.5
E	S	25	3:15 4.0	9:48 0.0	16:02 4.2	22:31 0.3
	S	26	4:22 4.0	10:42 −0.1	16:57 4.4	23:28 0.1
	M	27	5:22 4.0	11:35 −0.2	17:45 4.7	. . . . .
	Tu	28	0:20 −0.1	6:15 4.0	12:22 −0.2	18:30 4.9
	W	29	1:07 −0.3	7:05 4.0	13:07 −0.2	19:12 5.0
○	Th	30	1:52 −0.3	7:50 4.0	13:50 −0.1	19:52 5.0
	F	31	2:35 −0.4	8:31 3.9	14:30 0.0	20:32 4.9

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	3:17 −0.3	9:10 3.8	15:08 0.2	21:08 4.8
	S	2	3:57 −0.2	9:46 3.7	15:46 0.5	21:45 4.6
	M	3	4:37 0.0	10:17 3.6	16:20 0.7	22:20 4.4
A	Tu	4	5:15 0.1	10:51 3.5	16:56 0.9	22:53 4.2
	W	5	5:55 0.3	11:28 3.6	17:37 1.0	23:31 4.1
	Th	6	6:36 0.4	12:10 3.7	18:25 1.0	. . . . .
☾	F	7	0:13 3.9	7:12 0.5	13:00 3.8	19:23 1.0
	S	8	1:02 3.9	7:57 0.5	13:54 3.9	20:27 0.9
E	S	9	1:54 3.8	8:43 0.5	14:50 4.1	21:30 0.7
	M	10	2:50 3.8	9:35 0.4	15:46 4.4	22:30 0.5
	Tu	11	3:48 3.8	10:27 0.3	16:40 4.7	23:27 0.2
	W	12	4:50 3.9	11:20 0.2	17:33 4.9	. . . . .
	Th	13	0:20 0.0	5:48 4.0	12:12 0.0	18:25 5.1
	F	14	1:12 −0.3	6:45 4.1	13:08 −0.1	19:16 5.3
● N	S	15	2:08 −0.5	7:42 4.2	13:56 −0.1	20:07 5.3
P	S	16	2:58 −0.6	8:37 4.2	14:48 −0.1	20:58 5.3
	M	17	3:44 −0.6	9:33 4.2	15:43 0.0	21:50 5.1
	Tu	18	4:36 −0.6	10:30 4.2	16:42 0.1	22:43 4.9
	W	19	5:30 −0.5	11:28 4.2	17:43 0.2	23:39 4.6
	Th	20	6:24 −0.4	12:30 4.2	18:48 0.3	. . . . .
☽ E	F	21	0:37 4.3	7:20 −0.2	13:31 4.1	19:54 0.4
	S	22	1:42 4.1	8:17 0.0	14:32 4.2	21:02 0.4
	S	23	2:49 3.9	9:15 0.0	15:30 4.3	22:07 0.4
	M	24	3:57 3.7	10:12 0.1	16:35 4.4	23:07 0.3
	Tu	25	5:01 3.7	11:06 0.1	17:17 4.5	. . . . .
	W	26	0:00 0.2	6:00 3.6	11:58 0.1	18:05 4.6
	Th	27	0:50 0.1	6:52 3.6	12:43 0.1	18:50 4.7
S	F	28	1:35 0.1	7:37 3.6	13:29 0.2	19:30 4.7
○	S	29	2:18 −0.1	8:18 3.6	14:10 0.3	20:10 4.7
	S	30	2:56 −0.1	8:53 3.6	14:48 0.4	20:45 4.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	3:33	9:25	15:23	21:20
			−0.1	3.6	0.5	4.6
	Tu	2	4:09	9:50	15:56	21:52
			0.0	3.7	0.6	4.5
	W	3	4:42	10:20	16:28	22:22
			0.0	3.8	0.7	4.4
	Th	4	5:15	10:53	17:05	23:00
			0.1	4.0	0.7	4.3
	F	5	5:45	11:33	17:45	23:38
			0.2	4.1	0.7	4.2
E	S	6	6:20	12:18	18:35	. . .
			0.2	4.2	0.7	. . .
☾	S	7	0:21	6:57	13:08	19:33
			4.1	0.3	4.3	0.6
	M	8	1:08	7:45	14:05	20:37
			4.0	0.3	4.4	0.6
	Tu	9	2:02	8:38	15:03	21:47
			3.9	0.4	4.5	0.5
	W	10	3:04	9:40	16:05	22:53
			3.8	0.4	4.7	0.3
	Th	11	4:14	10:45	17:05	23:56
			3.8	0.3	4.8	0.1
	F	12	5:23	11:48	18:04	. . .
			3.8	0.1	5.0	. . .
N	S	13	0:43	6:32	12:50	19:02
			−0.2	4.0	0.0	5.2
● P	S	14	1:47	7:35	13:47	19:57
			−0.5	4.2	−0.2	5.3
	M	15	2:38	8:34	14:44	20:49
			−0.7	4.3	−0.3	5.3
	Tu	16	3:30	9:28	15:40	21:42
			−0.8	4.5	−0.3	5.2
	W	17	4:20	10:22	16:34	22:34
			−0.8	4.6	−0.2	5.0
	Th	18	5:10	11:15	17:30	23:27
			−0.7	4.6	−0.1	4.8
E	F	19	6:00	12:08	18:28	. . .
			−0.5	4.5	0.1	. . .
	S	20	0:20	7:52	13:02	19:30
			4.4	−0.2	4.4	0.2
☽	S	21	1:18	7:47	13:58	20:36
			4.1	0.0	4.3	0.4
	M	22	2:21	8:44	14:57	21:41
			3.7	0.2	4.3	0.4
	Tu	23	3:31	9:41	15:55	22:43
			3.5	0.3	4.3	0.5
	W	24	4:42	10:39	16:50	23:40
			3.4	0.4	4.3	0.5
	Th	25	5:46	11:32	17:40	. . .
			3.4	0.4	4.4	. . .
S	F	26	0:26	6:40	12:21	18:27
			0.4	3.4	0.4	4.4
	S	27	1:14	7:24	13:08	19:10
			0.2	3.5	0.4	4.5
○ A	S	28	1:54	7:58	13:48	19:47
			0.1	3.5	0.4	4.5
	M	29	2:30	8:28	14:25	20:21
			0.0	3.6	0.4	4.5
	Tu	30	3:02	8:52	14:58	20:52
			0.0	3.8	0.4	4.5
	W	31	3:34	9:18	15:30	21:23
			−0.1	4.0	0.4	4.5

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:03	9:45	16:00	21:58
			0.0	4.2	0.4	4.5
E	F	2	4:31	10:18	16:36	22:27
			0.0	4.4	0.4	4.4
	S	3	5:00	10:59	17:15	23:05
			0.0	4.5	0.4	4.3
	S	4	5:31	11:42	18:02	23:45
			0.1	4.6	0.4	4.2
☾	M	5	6:10	12:31	18:57	. . .
			0.2	4.6	0.6	. . .
	Tu	6	0:32	7:00	13:26	20:01
			4.1	0.3	4.6	0.5
	W	7	1:27	7:57	14:28	21:14
			3.9	0.4	4.6	0.5
	Th	8	2:32	9:06	15:35	22:30
			3.8	0.5	4.6	0.4
N	F	9	3:49	10:25	16:43	23:36
			3.7	0.4	4.7	0.1
	S	10	5:12	11:36	17:48	. . .
			3.8	0.2	4.9	. . .
	S	11	0:35	6:24	12:41	18:47
			−0.2	4.0	−0.1	5.1
P ●	M	12	1:28	7:25	13:40	19:43
			−0.5	4.4	−0.3	5.3
	Tu	13	2:18	8:20	14:32	20:36
			−0.8	4.6	−0.5	5.3
	W	14	3:08	9:10	15:25	21:27
			−0.9	4.8	−0.6	5.3
E	Th	15	3:56	10:00	16:17	22:17
			−0.9	4.9	−0.5	5.0
	F	16	4:43	10:48	17:11	23:07
			−0.7	4.9	−0.3	4.7
	S	17	5:31	11:38	18:06	23:58
			−0.5	4.7	−0.1	4.3
	S	18	6:24	12:30	19:05	. . .
			−0.2	4.6	0.2	. . .
☽	M	19	0:58	7:16	13:25	20:08
			3.9	0.1	4.4	0.4
	Tu	20	1:58	8:14	14:24	21:14
			3.6	0.4	4.2	0.5
	W	21	3:11	9:16	15:24	22:18
			3.3	0.6	4.1	0.6
S	Th	22	4:25	10:15	16:22	23:14
			3.3	0.6	4.1	0.5
	F	23	5:29	11:12	17:16	. . .
			3.3	0.6	4.1	. . .
	S	24	0:03	6:18	12:01	18:03
			0.5	3.4	0.5	4.2
A	S	25	0:45	6:54	12:43	18:43
			0.3	3.5	0.4	4.3
	M	26	1:22	7:22	13:24	19:19
			0.1	3.7	0.4	4.4
○	Tu	27	1:54	7:48	13:58	19:50
			0.1	3.8	0.3	4.4
	W	28	2:24	8:12	14:30	20:21
			0.0	4.1	0.3	4.5
E	Th	29	2:53	8:39	15:01	20:49
			0.0	4.3	0.2	4.5
	F	30	3:20	9:10	15:34	21:20
			0.0	4.5	0.1	4.5
	S	31	3:47	9:46	16:10	21:56
			0.0	4.7	0.1	4.5

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:17	10:26	16:50	22:35
			0.0	4.8	0.2	4.4
	M	2	4:52	11:12	17:38	23:16
			0.1	4.8	0.3	4.2
	Tu	3	5:36	12:01	18:34	. . .
			0.2	4.7	0.4	. . .
☾	W	4	0:07	6:27	12:58	19:41
			4.0	0.4	4.6	0.5
N	Th	5	1:07	7:32	14:02	20:59
			3.8	0.6	4.4	0.5
	F	6	2:20	8:57	15:15	22:14
			3.7	0.6	4.4	0.3
	S	7	3:47	10:20	16:28	23:18
			3.6	0.4	4.5	0.0
	S	8	5:09	11:30	17:33	. . .
			3.9	0.1	4.7	. . .
P	M	9	0:14	6:12	12:30	18:32
			−0.3	4.3	−0.2	5.0
●	Tu	10	1:05	7:07	13:25	19:25
			−0.6	4.7	−0.5	5.2
E	W	11	1:54	7:57	14:15	20:17
			−0.8	4.9	−0.7	5.2
	Th	12	2:40	8:44	15:06	21:04
			−0.9	5.1	−0.7	5.1
	F	13	3:27	9:31	15:56	21:54
			−0.8	5.1	−0.6	4.9
	S	14	4:14	10:18	16:47	22:42
			−0.6	5.0	−0.4	4.5
	S	15	5:01	11:05	17:41	23:34
			−0.3	4.8	−0.2	4.1
	M	16	5:51	11:55	18:38	. . .
			0.1	4.6	0.1	. . .
	Tu	17	0:30	6:46	12:50	19:40
			3.7	0.4	4.3	0.4
☽ S	W	18	1:35	7:46	13:49	20:44
			3.4	0.7	4.1	0.5
	Th	19	2:50	8:50	14:52	21:47
			3.2	0.8	3.9	0.6
	F	20	4:01	9:53	15:52	22:41
			3.2	0.8	3.9	0.5
A	S	21	4:57	10:48	16:45	23:30
			3.3	0.7	3.9	0.4
	S	22	5:38	11:35	17:30	. . .
			3.5	0.6	4.0	. . .
	M	23	0:08	6:10	12:16	18:10
			0.3	3.7	0.4	4.1
	Tu	24	0:40	6:37	12:52	18:43
			0.2	3.9	0.3	4.2
	W	25	1:01	7:08	13:27	19:13
			0.1	4.2	0.2	4.3
E ○	Th	26	1:40	7:32	14:00	19:42
			0.0	4.4	0.1	4.4
	F	27	2:06	8:02	14:33	20:13
			0.0	4.7	0.0	4.5
	S	28	2:36	8:38	15:10	20:48
			0.0	4.9	−0.1	4.5
	S	29	3:06	9:17	15:48	21:27
			0.0	5.0	0.0	4.4
	M	30	3:40	10:00	16:34	22:10
			0.1	5.0	0.0	4.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	0:58 −0.5	7:07 5.3	13:17 −0.7	19:28 5.5
	Tu	2	1:44 −0.7	7:52 5.3	13:59 −0.7	20:10 5.5
	W	3	2:28 −0.6	8:37 5.1	14:40 −0.5	20:52 5.4
	Th	4	3:10 −0.5	9:18 4.8	15:20 −0.2	21:34 5.2
	F	5	3:56 −0.2	10:02 4.4	15:58 0.2	22:15 5.0
	S	6	4:38 0.1	10:43 4.0	16:37 0.6	22:59 4.6
	S	7	5:25 0.4	11:30 3.7	17:19 0.9	23:46 4.3
S	M	8	6:16 0.7	12:22 3.4	18:08 1.2	. . . . .
☾ A	Tu	9	0:39 4.1	7:12 0.9	13:25 3.2	19:08 1.4
	W	10	1:37 3.9	8:12 1.0	14:32 3.3	20:18 1.3
	Th	11	2:38 3.9	9:08 0.9	15:30 3.5	21:24 1.2
	F	12	3:35 4.0	9:59 0.7	16:17 3.8	22:20 0.9
	S	13	4:27 4.1	10:45 0.5	17:00 4.1	23:07 0.6
	S	14	5:14 4.3	11:26 0.2	17:40 4.5	23:52 0.2
E	M	15	5:57 4.5	12:07 0.0	18:20 4.9	. . . . .
	Tu	16	0:35 0.0	6:39 4.6	12:45 −0.1	19:00 5.2
●	W	17	1:17 −0.2	7:20 4.7	13:24 −0.2	19:40 5.3
	Th	18	2:00 −0.4	8:00 4.7	14:03 −0.2	20:23 5.4
	F	19	2:43 −0.4	8:43 4.6	14:42 −0.1	21:07 5.3
	S	20	3:30 −0.3	9:28 4.4	15:27 0.2	21:55 5.1
	S	21	4:20 −0.1	10:19 4.2	16:15 0.4	22:47 4.9
N P	M	22	5:15 0.1	11:18 4.0	17:18 0.7	23:46 4.7
	Tu	23	6:17 0.3	12:28 3.8	18:24 0.8	. . . . .
☽	W	24	0:52 4.5	7:23 0.3	13:43 3.9	19:48 0.8
	Th	25	2:02 4.4	8:30 0.2	14:55 4.1	21:00 0.6
	F	26	3:09 4.5	9:32 0.1	15:55 4.4	22:05 0.3
	S	27	4:13 4.7	10:28 −0.1	16:48 4.8	23:03 0.0
E	S	28	5:08 4.8	11:19 −0.3	17:35 5.1	23:52 −0.2
	M	29	5:59 4.9	12:07 −0.5	18:19 5.3	. . . . .
	Tu	30	0:40 −0.4	6:47 4.9	12:50 −0.5	19:01 5.5
MAY.						
○	W	1	1:24 −0.5	7:32 4.8	13:31 −0.4	19:42 5.5
	Th	2	2:06 −0.4	8:15 4.6	14:10 −0.2	20:23 5.4
	F	3	2:48 −0.3	8:55 4.4	14:47 0.1	21:05 5.2
	S	4	3:30 −0.1	9:37 4.1	15:55 0.5	21:44 4.9
S	S	5	4:12 0.2	10:16 3.8	16:00 0.8	22:25 4.6
	M	6	4:55 0.4	10:58 3.6	16:37 1.1	23:08 4.3
A	Tu	7	5:40 0.6	11:45 3.4	17:22 1.3	23:56 4.0
	W	8	6:30 0.8	12:39 3.4	18:20 1.3	. . . . .
☾	Th	9	0:48 3.9	7:12 0.8	13:38 3.5	19:30 1.3
	F	10	1:45 3.8	8:13 0.8	14:35 3.7	20:35 1.2
	S	11	2:45 3.8	9:05 0.6	15:26 4.0	21:35 0.9
E	S	12	3:40 4.0	9:58 0.4	16:14 4.4	22:30 0.5
	M	13	4:32 4.1	10:40 0.2	17:00 4.8	23:18 0.2
	Tu	14	5:20 4.3	11:25 0.0	17:46 5.1	. . . . .
	W	15	0:07 −0.1	6:07 4.5	12:10 −0.1	18:31 5.4
●	Th	16	0:56 −0.3	6:54 4.5	12:55 −0.2	19:17 5.6
	F	17	1:40 −0.5	7:40 4.6	13:40 −0.2	20:04 5.6
	S	18	2:30 −0.5	8:29 4.5	14:27 −0.1	20:52 5.6
N P	S	19	3:19 −0.5	9:21 4.4	15:17 0.1	21:43 5.3
	M	20	4:10 −0.3	10:16 4.3	16:11 0.3	22:37 5.1
	Tu	21	5:06 −0.2	11:17 4.1	17:12 0.5	23:35 4.8
	W	22	6:05 −0.1	12:23 4.1	18:20 0.6	. . . . .
☽	Th	23	0:37 4.6	7:05 0.0	13:29 4.2	19:32 0.6
	F	24	1:42 4.5	8:05 0.1	14:31 4.4	20:42 0.6
E	S	25	2:48 4.4	9:04 0.0	15:28 4.6	21:48 0.4
	S	26	3:50 4.5	9:59 0.0	16:20 4.9	22:42 0.1
	M	27	4:47 4.5	10:50 −0.1	17:08 5.0	23:35 0.0
	Tu	28	5:40 4.5	11:38 −0.2	17:52 5.2	. . . . .
	W	29	0:22 −0.1	6:27 4.4	12:23 −0.1	18:35 5.3
○	Th	30	1:06 −0.2	7:13 4.3	13:15 0.0	19:17 5.3
	F	31	1:49 −0.1	7:55 4.2	13:45 0.2	19:58 5.2
JUNE.						
S	S	1	2:28 0.0	8:36 4.0	14:20 0.4	20:38 5.0
	S	2	3:07 0.1	9:05 3.9	14:56 0.7	21:18 4.8
	M	3	3:47 0.2	9:50 3.7	15:30 0.9	21:55 4.6
A	Tu	4	4:26 0.3	10:28 3.6	16:06 1.0	22:35 4.3
	W	5	5:06 0.5	11:08 3.6	16:48 1.1	23:17 4.1
	Th	6	5:47 0.5	11:55 3.7	17:38 1.2	. . . . .
☾	F	7	0:01 4.0	6:30 0.6	12:47 3.8	18:39 1.1
	S	8	0:51 3.8	7:17 0.6	13:42 4.0	19:44 1.0
E	S	9	1:47 3.8	8:08 0.6	14:37 4.3	20:48 0.8
	M	10	2:45 3.8	9:02 0.4	15:31 4.5	21:50 0.6
	Tu	11	3:45 3.9	9:55 0.3	16:24 4.9	22:47 0.2
	W	12	4:43 4.1	10:48 0.1	17:16 5.2	23:41 0.0
	Th	13	5:40 4.2	11:40 0.0	18:07 5.5	. . . . .
	F	14	0:33 −0.3	6:34 4.4	12:32 −0.1	18:57 5.7
● N	S	15	1:25 −0.5	7:27 4.5	13:24 −0.2	19:48 5.7
P	S	16	2:15 −0.6	8:20 4.6	14:15 −0.1	20:38 5.7
	M	17	3:07 −0.6	9:13 4.6	15:10 0.0	21:31 5.5
	Tu	18	3:58 −0.6	10:08 4.5	16:05 0.1	22:24 5.3
	W	19	4:50 −0.5	11:05 4.5	17:08 0.2	23:20 5.0
	Th	20	5:43 −0.4	12:08 4.5	18:05 0.4	. . . . .
☽ E	F	21	0:17 4.8	6:38 −0.2	13:02 4.5	19:10 0.5
	S	22	1:17 4.5	7:35 0.0	14:00 4.6	20:15 0.5
	S	23	2:21 4.3	8:30 0.1	14:55 4.7	21:18 0.4
	M	24	3:27 4.2	9:27 0.2	15:49 4.8	22:20 0.4
	Tu	25	4:24 4.1	10:20 0.2	16:40 4.9	23:13 −0.4
	W	26	5:20 4.0	11:10 0.2	17:27 5.0	. . . . .
	Th	27	0:02 0.3	6:10 4.0	11:57 0.2	18:12 5.1
S	F	28	0:48 0.3	6:57 4.0	12:41 0.3	18:55 5.1
○	S	29	1:31 0.2	7:88 3.9	13:23 0.4	19:37 5.1
	S	30	2:10 0.2	8:18 3.9	14:00 0.5	20:16 5.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	4:22 5.1	10:48 0.1	16:46 4.1	22:50 0.0
	Tu	2	5:18 5.4	11:46 −0.2	17:49 4.3	23:48 −0.1
N	W	3	6:14 5.6	12:40 −0.4	18:48 4.5	. . . . .
○ P	Th	4	0:45 −0.2	7:06 5.8	13:32 −0.7	19.44 4.7
	F	5	1:39 −0.3	7:59 5.9	14:24 −0.8	20:36 4.8
	S	6	2:33 −0.3	8:50 5.8	15:14 −0.8	21:28 4.9
	S	7	3:26 −0.3	9:41 5.6	16:05 −0.8	22:20 4.9
	M	8	4:20 −0.1	10:32 5.4	16:55 −0.6	23:12 4.8
E	Tu	9	5:16 0.1	11:26 5.0	17:46 −0.4	. . . . .
	W	10	0:05 4.7	6:13 0.3	12:20 4.6	18:36 −0.1
☾	Th	11	0:58 4.7	7:13 0.4	13:19 4.3	19.30 0.2
	F	12	1:52 4.6	8:13 0.6	14:21 4.0	20:25 0.3
	S	13	2:47 4.6	9:19 0.7	15:23 3.8	21:20 0.5
	S	14	3:41 4.6	10:18 0.7	16:24 3.7	22:18 0.6
	M	15	4:31 4.6	11:12 0.6	17:18 3.7	23:08 0.6
	Tu	16	5:20 4.7	12:00 0.6	18:08 3.7	23:49 0.6
S A	W	17	6:06 4.8	12:41 0.5	18:50 3.7	. . . . .
	Th	18	0:31 0.6	6:46 4.9	13:20 0.4	19:28 3.8
●	F	19	1:10 0.6	7:27 4.9	13:54 0.2	20:08 3.9
	S	20	1:45 0.6	8:05 4.9	14:29 0.1	20:33 4.0
	S	21	2:20 0.6	8:40 4.8	15:02 0.1	21:04 4.1
	M	22	2:55 0.6	9:16 4.6	15:36 0.1	21:40 4.2
	Tu	23	3:31 0.6	9:50 4.5	16:10 0.1	22:18 4.3
E	W	24	4:14 0.5	10:23 4.4	16:45 0.2	23:03 4.4
	Th	25	5:01 0.5	11:06 4.2	17:26 0.3	23:52 4.5
	F	26	5:56 0.6	11:54 4.1	18:14 0.4	. . . . .
☽	S	27	0:47 4.5	7:00 0.6	12:51 3.9	19:10 0.5
	S	28	1:49 4.6	8:08 0.6	14:00 3.8	20:16 0.5
	M	29	2:55 4.7	9:21 0.5	15:16 3.8	21:25 0.4
	Tu	30	3:58 4.9	10:29 0.3	16:31 4.0	22.32 0.2
N	W	31	5:00 5.2	11:29 0.0	17:38 4.2	23:35 0.0

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	5:56 5.5	12:25 −0.4	18:36 4.6	. . . . .
○	F	2	0:34 −0.3	6:50 5.7	13:16 −0.7	19:30 4.9
	S	3	1:27 −0.4	7:48 5.8	14:06 −0.9	20:19 5.1
	S	4	2:19 −0.5	8:32 5.8	14:52 −0.9	21:06 5.2
	M	5	3:10 −0.5	9:22 5.6	15:40 −0.9	21:54 5.2
E	Tu	6	4:00 −0.4	10:10 5.3	16:25 −0.7	22:40 5.1
	W	7	4:48 −0.1	10:58 4.9	17:11 −0.3	23:28 4.9
	Th	8	5:41 0.1	11:50 4.5	17:58 0.0	. . . . .
☾	F	9	0:20 4.7	6:36 0.4	12:42 4.1	18:48 0.4
	S	10	1:12 4.5	7:36 0.7	13:42 3.7	19:43 0.7
	S	11	2:06 4.4	8:40 0.8	14:50 3.5	20:40 0.8
	M	12	3:03 4.3	9:45 0.9	15:54 3.4	21:40 0.9
S	Tu	13	4:00 4.3	10:42 0.9	16:58 3.4	22:34 0.9
A	W	14	4:50 4.4	11:30 0.8	17:42 3.6	23:25 0.8
	Th	15	5:28 4.6	12:12 0.6	18:24 3.7	. . . . .
	F	16	0:10 0.6	6:22 4.8	12:49 0.3	19:00 3.9
	S	17	0:48 0.5	7:02 4.8	13:24 0.1	19:32 4.2
●	S	18	1:26 0.4	7:40 4.8	13:58 0.0	20:03 4.4
	M	19	2:02 0.3	8:15 4.8	14:30 −0.1	20:37 4.5
E	Tu	20	2:37 0.2	8:50 4.7	15:04 −0.1	21:13 4.7
	W	21	3:16 0.2	9:25 4.6	15:36 0.0	21.52 4.8
	Th	22	3:58 0.2	10:00 4.5	16:12 0.1	22:34 4.8
	F	23	4:42 0.3	10:41 4.3	16:52 0.3	23:21 4.7
	S	24	5:35 0.4	11:30 4.1	17:41 0.4	. . . . .
☽	S	25	0:19 4.6	6:38 0.6	12:29 3.8	18:41 0.6
	M	26	1:28 4.5	7:49 0.6	13:44 3.6	19:55 0.7
N	Tu	27	2:32 4.5	9:04 0.5	15:08 3.7	21:13 0.6
	W	28	3:41 4.7	10:12 0.3	16:24 4.0	22:24 0.3
	Th	29	4:45 5.0	11:13 −0.1	17:26 4.3	23:28 0.0

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	5:42 5.3	12:07 −0.4	18:21 4.7	. . . . .
	S	2	0:23 −0.3	6:35 5.5	12:56 −0.7	19:10 5.1
○	S	3	1:14 −0.5	7:25 5.7	13:42 −0.9	19:56 5.3
E	M	4	2:02 −0.6	8:14 5.6	14:28 −0.9	20:40 5.4
	Tu	5	2:48 −0.6	9:00 5.4	15:11 −0.7	21:24 5.4
	W	6	3:34 −0.5	9:45 5.1	15:53 −0.5	22:06 5.2
	Th	7	4:20 −0.2	10:30 4.7	16:34 −0.1	22:51 5.0
	F	8	5:08 0.1	11:16 4.3	17:18 0.3	23:38 4.7
	S	9	6:00 0.4	12:05 3.9	18:06 0.7	. . . . .
☾	S	10	0:28 4.4	6:55 0.7	13:02 3.5	18:56 1.0
S	M	11	1:24 4.2	7:57 0.9	14:09 3.3	19:57 1.2
A	Tu	12	2:22 4.1	9:01 1.0	15:18 3.3	21:03 1.2
	W	13	3:21 4.1	10:00 0.9	16:17 3.4	22:04 1.1
	Th	14	4:17 4.2	10:50 0.7	17:07 3.6	22:58 0.8
	F	15	5:08 4.4	11:32 0.5	17:45 3.9	23:41 0.6
	S	16	5:52 4.5	12:10 0.2	18:20 4.2	. . . . .
	S	17	0:24 0.4	6:32 4.7	12:47 0.0	18:56 4.5
●	M	18	1:02 0.2	7:10 4.7	13:22 −0.1	19:31 4.8
E	Tu	19	1:40 0.0	7:48 4.8	13:57 −0.2	20:08 5.0
	W	20	2:20 −0.1	8:25 4.7	14:32 −0.2	20:46 5.1
	Th	21	3:00 −0.2	9:02 4.6	15:08 −0.1	21:27 5.1
	F	22	3:43 −0.1	9:42 4.5	15:45 0.1	22:11 5.0
	S	23	4:30 0.1	10:25 4.2	16:30 0.3	23:01 4.8
	S	24	5:23 0.3	11:18 4.0	17:22 0.6	23:59 4.6
N ☽	M	25	6:25 0.5	12:25 3.7	18:28 0.8	. . . . .
	Tu	26	1:06 4.5	7:35 0.6	13:45 3.6	19:47 0.8
	W	27	2:17 4.4	8:48 0.5	15:05 3.8	21:07 0.6
P	Th	28	3:28 4.6	9:50 0.2	16:15 4.1	22:17 0.3
	F	29	4:30 4.8	10:53 −0.1	17:11 4.5	23:17 0.0
	S	30	5:26 5.1	11:45 −0.4	18:00 5.0	. . . . .
	S	31	0:10 −0.3	6:19 5.3	12:32 −0.6	18:48 5.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator: A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	0:58 −0.5	7:07 5.3	13:17 −0.7	19:28 5.5
	Tu	2	1:44 −0.7	7:52 5.3	13:59 −0.7	20:10 5.5
	W	3	2:28 −0.6	8:37 5.1	14:40 −0.5	20:52 5.4
	Th	4	3:10 −0.5	9:18 4.8	15:20 −0.2	21:34 5.2
	F	5	3:55 −0.2	10:02 4.4	15:58 0.2	22:15 5.0
	S	6	4:38 0.1	10:43 4.0	16:37 0.6	22:59 4.6
	S	7	5:25 0.4	11:30 3.7	17:19 0.9	23:46 4.3
S	M	8	6:16 0.7	12:22 3.4	18:08 1.2	. . . . .
☾ A	Tu	9	0:39 4.1	7:12 0.9	13:25 3.2	19:08 1.4
	W	10	1:37 3.9	8:12 1.0	14:32 3.3	20:18 1.3
	Th	11	2:38 3.9	9:08 0.9	15:30 3.5	21:24 1.2
	F	12	3:35 4.0	9:59 0.7	16:17 3.8	22:20 0.9
	S	13	4:27 4.1	10:45 0.5	17:00 4.1	23:07 0.6
	S	14	5:14 4.3	11:26 0.2	17:40 4.5	23:52 0.2
E	M	15	5:57 4.5	12:07 0.0	18:20 4.9	. . . . .
	Tu	16	0:35 0.0	6:39 4.6	12:45 −0.1	19:00 5.2
●	W	17	1:17 −0.2	7:20 4.7	13:24 −0.2	19:40 5.3
	Th	18	2:00 −0.4	8:00 4.7	14:03 −0.2	20:23 5.4
	F	19	2:43 −0.4	8:43 4.6	14:42 −0.1	21:07 5.3
	S	20	3:30 −0.3	9:28 4.4	15:27 0.2	21:55 5.1
	S	21	4:20 −0.1	10:19 4.2	16:15 0.4	22:47 4.9
N P	M	22	5:15 0.1	11:18 4.0	17:18 0.7	23:46 4.7
	Tu	23	6:17 0.3	12:28 3.8	18:24 0.8	. . . . .
☽	W	24	0:52 4.5	7:23 0.3	13:43 3.9	19:43 0.8
	Th	25	2:02 4.4	8:30 0.2	14:55 4.1	21:00 0.6
	F	26	3:09 4.5	9:32 0.1	15:55 4.4	22:05 0.3
	S	27	4:13 4.7	10:28 −0.1	16:48 4.8	23:03 0.0
E	S	28	5:08 4.8	11:19 −0.3	17:35 5.1	23:52 −0.2
	M	29	5:59 4.9	12:07 −0.5	18:19 5.3	. . . . .
	Tu	30	0:40 −0.4	6:47 4.9	12:50 −0.5	19:01 5.5

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:24 −0.5	7:32 4.8	13:31 −0.4	19:42 5.5
	Th	2	2:06 −0.4	8:15 4.6	14:10 −0.2	20:23 5.4
	F	3	2:48 −0.3	8:55 4.4	14:47 0.1	21:05 5.2
	S	4	3:30 −0.1	9:37 4.1	15:55 0.5	21:44 4.9
S	S	5	4:12 0.2	10:16 3.8	16:00 0.8	22:25 4.6
	M	6	4:55 0.4	10:58 3.6	16:37 1.1	23:08 4.3
A	Tu	7	5:40 0.6	11:45 3.4	17:22 1.3	23:56 4.0
	W	8	6:30 0.8	12:39 3.4	18:20 1.3	. . . . .
☾	Th	9	0:48 3.9	7:12 0.8	13:38 3.5	19:30 1.3
	F	10	1:45 3.8	8:13 0.8	14:35 3.7	20:35 1.2
	S	11	2:45 3.8	9:05 0.6	15:26 4.0	21:35 0.9
E	S	12	3:40 4.0	9:58 0.4	16:14 4.4	22:30 0.5
	M	13	4:32 4.1	10:40 0.2	17:00 4.8	23:18 0.2
	Tu	14	5:20 4.3	11:25 0.0	17:46 5.1	. . . . .
	W	15	0:07 −0.1	6:07 4.5	12:10 −0.1	18:31 5.4
●	Th	16	0:56 −0.3	6:54 4.5	12:55 −0.2	19:17 5.6
	F	17	1:40 −0.5	7:40 4.6	13:40 −0.2	20:04 5.6
	S	18	2:30 −0.5	8:29 4.5	14:27 −0.1	20:52 5.6
N P	S	19	3:19 −0.5	9:21 4.4	15:17 0.1	21:43 5.3
	M	20	4:10 −0.3	10:16 4.3	16:11 0.3	22:37 5.1
	Tu	21	5:06 −0.2	11:17 4.1	17:12 0.5	23:35 4.8
	W	22	6:05 −0.1	12:23 4.1	18:20 0.6	. . . . .
☽	Th	23	0:37 4.6	7:05 0.0	13:29 4.2	19:32 0.6
	F	24	1:42 4.5	8:05 0.1	14:31 4.4	20:42 0.6
E	S	25	2:48 4.4	9:04 0.0	15:28 4.6	21:48 0.4
	S	26	3:50 4.5	9:59 0.0	16:20 4.9	22:42 0.1
	M	27	4:47 4.5	10:50 −0.1	17:08 5.0	23:35 0.0
	Tu	28	5:40 4.5	11:38 −0.2	17:52 5.2	. . . . .
	W	29	0:22 −0.1	6:27 4.4	12:23 −0.1	18:35 5.3
○	Th	30	1:06 −0.2	7:13 4.3	13:15 0.0	19:17 5.3
	F	31	1:49 −0.1	7:55 4.2	13:45 0.2	19:58 5.2

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	2:28 0.0	8:36 4.0	14:20 0.4	20:38 5.0
	S	2	3:07 0.1	9:05 3.9	14:56 0.7	21:18 4.8
	M	3	3:47 0.2	9:50 3.7	15:30 0.9	21:56 4.6
A	Tu	4	4:26 0.3	10:28 3.6	16:06 1.0	22:35 4.3
	W	5	5:05 0.5	11:08 3.6	16:48 1.1	23:17 4.1
	Th	6	5:47 0.5	11:55 3.7	17:38 1.2	. . . . .
☾	F	7	0:01 4.0	6:30 0.6	12:47 3.8	18:39 1.1
	S	8	0:51 3.8	7:17 0.6	13:42 4.0	19:44 1.0
E	S	9	1:47 3.8	8:08 0.6	14:37 4.3	20:48 0.8
	M	10	2:45 3.8	9:02 0.4	15:31 4.5	21:50 0.6
	Tu	11	3:45 3.9	9:55 0.3	16:24 4.9	22:47 0.2
	W	12	4:43 4.1	10:48 0.1	17:16 5.2	23:41 0.0
	Th	13	5:40 4.2	11:40 0.0	18:07 5.5	. . . . .
	F	14	0:33 −0.3	6:34 4.4	12:32 −0.1	18:57 5.7
● N	S	15	1:25 −0.5	7:27 4.5	13:24 −0.2	19:48 5.7
P	S	16	2:15 −0.6	8:20 4.6	14:15 −0.1	20:38 5.7
	M	17	3:07 −0.6	9:13 4.6	15:10 0.0	21:31 5.5
	Tu	18	3:58 −0.6	10:08 4.5	16:05 0.1	22:24 5.3
	W	19	4:50 −0.5	11:05 4.5	17:08 0.2	23:20 5.0
	Th	20	5:43 −0.4	12:08 4.5	18:05 0.4	. . . . .
☽ E	F	21	0:17 4.8	6:38 −0.2	13:02 4.5	19:10 0.5
	S	22	1:17 4.5	7:35 0.0	14:00 4.6	20:15 0.5
	S	23	2:21 4.3	8:30 0.1	14:55 4.7	21:18 0.4
	M	24	3:27 4.2	9:27 0.2	15:49 4.8	22:20 0.4
	Tu	25	4:24 4.1	10:20 0.2	16:40 4.9	23:13 −0.4
	W	26	5:20 4.0	11:10 0.2	17:27 5.0	. . . . .
	Th	27	0:02 0.3	6:10 4.0	11:57 0.2	18:12 5.1
S	F	28	0:48 0.3	6:57 4.0	12:41 0.3	18:55 5.1
○	S	29	1:31 0.2	7:38 3.9	13:23 0.4	19:37 5.1
	S	30	2:10 0.2	8:18 3.9	14:00 0.5	20:16 5.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	2:45	8:54	14:35	20:53
			0.2	3.8	0.7	4.8
	Tu	2	3:20	9:25	15:07	21:30
			0.2	3.8	0.8	4.6
	W	3	3:54	9:57	15:42	22:08
			0.2	3.9	0.9	4.4
	Th	4	4:49	10:33	16:22	22:38
			0.3	3.9	0.8	4.2
	F	5	5:03	11:15	17:06	23:16
			0.4	4.0	0.8	4.1
E	S	6	5:41	12:01	17:58	. . .
			0.4	4.2	0.8	. . .
☾	S	7	0:01	6:26	12:55	18:58
			4.0	0.5	4.3	0.8
	M	8	0:54	7:17	13:50	20:03
			3.9	0.5	4.4	0.8
	Tu	9	1:55	8:13	14:51	21:10
			3.8	0.5	4.6	0.6
	W	10	3:03	9:15	15:51	22:16
			3.8	0.4	4.8	0.4
	Th	11	4:12	10:18	16:50	23:17
			3.9	0.3	5.0	0.1
	F	12	5:18	11:18	17:47	. . .
			4.1	0.1	5.4	. . .
N	S	13	0:14	6:18	12:17	18:40
			−0.2	4.3	−0.1	5.6
● P	S	14	1:07	7:13	13:12	19:32
			−0.5	4.6	−0.2	5.8
	M	15	1:59	8:08	14:06	20:24
			−0.7	4.8	−0.3	5.8
	Tu	16	2:48	9:00	15:00	21:15
			−0.8	4.9	−0.3	5.7
	W	17	3:38	9:50	15:53	22:07
			−0.8	5.0	−0.2	5.5
	Th	18	4:27	10:42	16:47	22:58
			−0.7	5.0	−0.1	5.1
E	F	19	5:17	11:34	17:42	23:50
			−0.5	4.9	0.1	4.8
	S	20	6:07	12:27	18:40	. . .
			−0.2	4.8	0.8	. . .
☽	S	21	0:48	7:00	13:22	19:42
			4.4	0.1	4.7	0.5
	M	22	1:50	7:55	14:20	20:48
			4.1	0.3	4.6	0.6
	Tu	23	2:56	8:52	15:17	21:52
			3.9	0.5	4.6	0.7
	W	24	4:00	9:50	16:11	22:52
			3.7	0.5	4.6	0.7
	Th	25	5:00	10:45	17:02	23:43
			3.7	0.6	4.7	0.6
S	F	26	5:58	11:35	17:50	. . .
			3.7	0.5	4.8	. . .
	S	27	0:29	6:38	12:21	18:33
			0.5	3.8	0.5	4.9
○ A	S	28	1:08	7:18	13:03	19:15
			0.3	3.9	0.5	4.9
	M	29	1:44	7:54	13:40	19:53
			0.2	3.9	0.5	4.8
	Tu	30	2:17	8:25	14:15	20:30
			0.1	4.0	0.5	4.8
	W	31	2:50	8:58	14:46	21:02
			0.1	4.1	0.6	4.6

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:20	9:25	15:21	21:34
			0.1	4.2	0.5	4.5
E	F	2	3:52	10:00	15:58	22:06
			0.1	4.4	0.5	4.3
	S	3	4:28	10:39	16:38	22:43
			0.2	4.4	0.5	4.2
	S	4	5:00	11:23	17:27	23:25
			0.3	4.5	0.6	4.1
☾	M	5	5:42	12:14	18:23	. . .
			0.4	4.5	0.6	. . .
	Tu	6	0:15	6:32	13:13	19:30
			3.9	0.5	4.5	0.7
	W	7	1:19	7:35	14:19	20:43
			3.7	0.6	4.6	0.6
	Th	8	2:35	8:46	15:26	21:53
			3.7	0.6	4.7	0.4
N	F	9	3:54	9:58	16:30	22:59
			3.8	0.4	5.0	0.1
	S	10	5:05	11:05	17:29	23:57
			4.1	0.2	5.3	−0.2
	S	11	6:06	12:06	18:24	. . .
			4.4	−0.1	5.5	. . .
P ●	M	12	0:50	7:00	13:00	19:17
			−0.6	4.8	−0.4	5.7
	Tu	13	1:40	7:50	13:54	20:07
			−0.8	5.1	−0.6	5.8
	W	14	2:27	8:38	14:44	20:56
			−1.0	5.3	−0.6	5.7
E	Th	15	3:13	9:26	15:34	21:45
			−1.0	5.4	−0.5	5.5
	F	16	4:00	10:12	16:23	22:33
			−0.8	5.3	−0.3	5.1
	S	17	4:45	11:02	17:15	23:24
			−0.5	5.1	−0.1	4.7
	S	18	5:32	11:52	18:10	. . .
			−0.1	4.9	0.2	. . .
☽	M	19	0:17	6:24	12:45	19:08
			4.2	0.2	4.6	0.5
	Tu	20	1:17	7:17	13:42	20:18
			3.9	0.6	4.4	0.7
	W	21	2:26	8:18	14:41	21:20
			3.6	0.8	4.4	0.8
S	Th	22	3:35	9:21	15:40	22:25
			3.5	0.8	4.3	0.8
	F	23	4:38	10:20	16:35	23:15
			3.5	0.8	4.4	0.7
	S	24	5:30	11:13	17:24	. . .
			3.6	0.7	4.5	. . .
A	S	25	0:00	6:12	12:00	18:10
			0.5	3.8	0.6	4.6
	M	26	0:37	6:48	12:40	18:50
			0.3	4.0	0.5	4.7
○	Tu	27	1:10	7:20	13:18	19:27
			0.2	4.2	0.4	4.7
	W	28	1:44	7:50	13:51	20:00
			0.0	4.4	0.3	4.7
E	Th	29	2:17	8:21	14:25	20:33
			0.0	4.5	0.2	4.6
	F	30	2:45	9:54	15:00	21:06
			0.0	4.7	0.2	4.5
	S	31	3:15	9:29	15:37	21:38
			0.1	4.7	0.2	4.4

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:48	10:07	16:18	22:16
			0.1	4.7	0.2	4.3
	M	2	4:28	10:52	17:05	22:58
			0.3	4.7	0.4	4.1
	Tu	3	5:08	11:43	18:01	23:51
			0.4	4.6	0.5	3.8
☾	W	4	6:00	12:45	19:07	. . .
			0.6	4.5	0.6	. . .
N	Th	5	1:00	7:10	13:54	20:23
			3.7	0.8	4.4	0.6
	F	6	2:24	8:30	15:05	21:36
			3.6	0.8	4.5	0.4
	S	7	3:45	9:48	16:12	22:40
			3.8	0.5	4.8	0.1
	S	8	4:53	10:55	17:12	23:37
			4.2	0.2	5.1	−0.3
P	M	9	5:50	11:55	18:06	. . .
			4.7	−0.2	5.4	. . .
●	Tu	10	0:27	6:40	12:48	18:58
			−0.6	5.1	−0.5	5.6
E	W	11	1:16	7:27	13:38	19:47
			−0.8	5.4	−0.7	5.6
	Th	12	2:01	8:13	14:25	20:35
			−0.9	5.6	−0.7	5.5
	F	13	2:45	8:58	15:12	21:21
			−0.8	5.6	−0.7	5.2
	S	14	3:30	9:42	15:59	22:08
			−0.6	5.5	−0.5	4.9
	S	15	4:13	10:28	16:47	22:55
			−0.3	5.2	−0.4	4.5
	M	16	4:57	11:16	17:38	23:47
			0.1	4.9	0.2	4.0
	Tu	17	5:45	12:08	18:34	. . .
			0.5	4.6	0.5	. . .
☽ S	W	18	0:46	6:40	13:08	19:35
			3.7	0.9	4.3	0.8
	Th	19	1:54	7:41	14:04	20:40
			3.4	1.1	4.1	0.9
	F	20	3:08	8:49	15:05	21:42
			3.4	1.1	4.1	0.9
A	S	21	4:05	9:51	16:03	22:33
			3.5	1.0	4.1	0.6
	S	22	4:55	10:46	16:54	23:18
			3.6	0.9	4.3	0.5
	M	23	5:33	11:32	17:38	23:57
			3.9	0.7	4.4	0.3
	Tu	24	6:08	12:12	18:18	. . .
			4.2	0.5	4.5	. . .
	W	25	0:32	6:41	12:50	18:56
			0.2	4.5	0.3	4.6
E ○	Th	26	1:05	7:15	13:26	19:30
			0.1	4.7	0.1	4.6
	F	27	1:37	7:48	14:02	20:05
			0.0	4.9	0.0	4.6
	S	28	2:10	8:25	14:40	20:40
			0.0	5.0	−0.1	4.5
	S	29	2:48	9:02	15:20	21:15
			0.0	5.0	−0.1	4.4
	M	30	3:19	9:45	16:03	21:57
			0.1	5.0	0.0	4.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	3:57	10:30	16:58	22:45
			0.3	4.8	0.2	4.0
	W	2	4:46	11:23	17:50	23:45
			0.6	4.6	0.4	3.8
N	Th	3	5:45	12:26	18:56	. . .
☾			0.8	4.4	0.5	. . .
	F	4	1:00	7:00	13:37	20:08
			3.7	0.9	4.4	0.5
	S	5	2:22	8:23	14:48	21:17
			3.7	0.8	4.5	0.3
	S	6	3:36	9:40	15:55	22:18
			4.0	0.5	4.7	0.0
P	M	7	4:37	10:44	16:55	23:18
			4.5	0.2	4.9	—0.3
	Tu	8	5:29	11:40	17:50	. . .
			4.9	—0.2	5.1	. . .
E	W	9	0:02	6:17	12:31	18:40
			—0.5	5.3	—0.5	5.3
●	Th	10	0:50	7:02	13:18	19:27
			—0.7	5.5	—0.7	5.3
	F	11	1:34	7:45	14:05	20:13
			—0.7	5.6	—0.7	5.1
	S	12	2:17	8:30	14:50	20:58
			—0.6	5.6	—0.6	4.9
	S	13	2:58	9:12	15:34	21:43
			—0.3	5.5	—0.4	4.6
	M	14	3:41	9:57	16:21	22:30
			0.0	5.2	—0.1	4.2
	Tu	15	4:23	10:43	17:10	23:20
			0.4	4.9	0.2	3.8
S	W	16	5:08	11:32	18:02	. . .
			0.8	4.5	0.5	. . .
☽	Th	17	0:13	6:00	12:25	18:57
			3.6	1.1	4.2	0.7
	F	18	1:15	7:00	13:22	19:55
			3.4	1.3	4.0	0.9
A	S	19	2:19	8:07	14:22	20:51
			3.4	1.3	3.9	0.8
	S	20	3:17	9:12	15:19	21:42
			3.5	1.2	3.9	0.7
	M	21	4:08	10:06	16:14	22:27
			3.8	1.0	4.0	0.6
	Tu	22	4:44	10:53	16:58	23:08
			4.1	0.7	4.2	0.4
E	W	23	5:23	11:37	17:41	23:47
			4.4	0.4	4.3	0.2
	Th	24	6:00	12:18	18:20	. . .
			4.7	0.1	4.4	. . .
○	F	25	0:24	6:41	12:59	19:00
			0.0	5.0	—0.1	4.5
	S	26	1:01	7:20	13:40	19:40
			0.0	5.2	—0.2	4.5
	S	27	1:38	8:00	14:21	20:20
			0.0	5.3	—0.3	4.4
	M	28	2:17	8:42	15:06	21:02
			0.0	5.3	—0.2	4.3
	Tu	29	2:59	9:28	15:53	21:50
			0.2	5.1	—0.1	4.2
N	W	30	3:44	10:17	16:44	22:43
			0.4	5.0	0.0	4.0
	Th	31	4:38	11:12	17:42	23:48
			0.6	4.7	0.2	3.9

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	5:43	12:13	18:46	. . .
			0.8	4.5	0.3	. . .
	S	2	1:01	6:58	13:22	19:52
			3.9	0.9	4.4	0.3
P	S	3	2:13	8:17	14:30	20:55
			4.0	0.8	4.4	0.2
	M	4	3:17	9:28	15:35	21:52
			4.3	0.5	4.5	0.0
E	Tu	5	4:18	10:30	16:35	22:46
			4.7	0.2	4.7	—0.2
	W	6	5:04	11:22	17:32	23:36
			5.0	—0.1	4.8	—0.4
	Th	7	5:51	12:18	18:20	. . .
			5.3	—0.4	4.9	. . .
●	F	8	0:28	6:36	13:00	19:10
			—0.5	5.5	—0.5	4.8
	S	9	1:08	7:20	13:46	19:55
			—0.4	5.6	—0.5	4.7
	S	10	1:50	8:04	14:30	20:40
			—0.3	5.5	—0.4	4.5
	M	11	2:32	8.47	15:14	21:23
			0.0	5.4	—0.2	4.2
S	Tu	12	3:13	9:30	15:58	22:06
			0.3	5.1	0.0	4.0
	W	13	3:54	10:13	16:42	22:52
			0.6	4.8	0.2	3.7
	Th	14	4:36	10:57	17:29	23:40
			0.9	4.5	0.4	3.6
	F	15	5:21	11:45	18:17	. . .
			1.2	4.2	0.6	. . .
A	S	16	0:30	6:15	12:36	19:06
☽			3.5	1.3	4.0	0.7
	S	17	1:25	7:16	13:30	19:55
			3.5	1.3	3.8	0.8
	M	18	2:18	8:18	14:25	20:44
			3.7	1.2	3.8	0.7
E	Tu	19	3:08	9:16	15:19	21:32
			4.0	1.0	3.8	0.6
	W	20	3:54	10:10	16:10	22:18
			4.3	0.7	3.9	0.4
	Th	21	4:40	10:59	17:00	23:01
			4.6	0.4	4.1	0.2
	F	22	5:25	11:46	17:46	23:45
			4.9	0.1	4.2	0.1
	S	23	6:09	12:32	18:32	. . .
			5.2	—0.1	4.3	. . .
○	S	24	0:30	6:55	13:19	19:18
			0.0	5.4	—0.3	4.4
	M	25	1:14	7:40	14:05	20:05
			0.0	5.5	—0.4	4.4
N	Tu	26	2:00	8:27	15:55	20:55
			0.0	5.5	—0.4	4.3
	W	27	2:49	9:15	15:45	21:47
			0.1	5.3	—0.3	4.3
P	Th	28	3:41	10:07	16:36	22:48
			0.3	5.1	—0.2	4.2
	F	29	4:38	11:02	17:32	23:45
			0.5	4.9	—0.1	4.2
	S	30	5:42	12:02	18:29	. . .
			0.6	4.7	0.0	. . .

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:50	6:50	13:05	19:28
			4.2	0.7	4.5	0.1
E	M	2	1:52	8:01	14:06	20:27
			4.4	0.6	4.4	0.1
	Tu	3	2:50	9:08	15:14	21:23
			4.6	0.5	4.4	0.0
	W	4	3:48	10:09	16:15	22:18
			4.8	0.2	4.4	—0.1
	Th	5	4:40	11:06	17:11	23:10
			5.0	0.1	4.4	—0.1
	F	6	5:27	11:57	18:04	23:58
			5.2	—0.1	4.4	—0.1
	S	7	6:13	12:45	18:58	. . .
			5.4	—0.2	4.4	. . .
●	S	8	0:48	6:58	13:30	19.31
			—0.1	5.4	—0.2	4.3
S	M	9	1:30	7:42	14:13	20:22
			0.0	5.4	—0.2	4.2
	Tu	10	2:10	8:24	14:55	21:05
			0.2	5.2	—0.1	4.0
	W	11	2:50	9:05	15:35	21:45
			0.5	5.0	0.0	3.9
	Th	12	3:28	9:47	16:15	22:24
			0.7	4.7	0.2	3.8
	F	13	4:06	10:26	16:55	23:02
			0.8	4.5	0.3	3.7
A	S	14	4:46	11:06	17:34	23:44
			1.0	4.2	0.4	3.7
	S	15	5:30	11:47	18:15	. . .
			1.1	4.0	0.6	. . .
☽	M	16	0:30	6:22	12:32	18:57
			3.8	1.1	3.8	0.6
E	Tu	17	1:20	7:20	13:22	19:43
			4.0	1.1	3.7	0.6
	W	18	2:13	8:20	14:18	20:33
			4.2	1.0	3.7	0.6
	Th	19	3:05	9:23	15:16	21:27
			4.4	0.8	3.7	0.5
	F	20	3:58	10:22	16:16	22:20
			4.7	0.6	3.9	0.3
	S	21	4:51	11:15	17:15	23:12
			5.0	0.2	4.0	0.2
	S	22	5:43	12:10	18:10	. . .
			5.3	—0.1	4.2	. . .
N	M	23	0:05	6:33	13:00	19:02
○			0.0	5.5	—0.3	4.3
	Tu	24	0:58	7:23	13:50	19:56
			0.0	5.6	—0.5	4.5
P	W	25	1:50	8:13	14:40	20:48
			—0.1	5.6	—0.6	4.5
	Th	26	2:43	9:05	15:31	21:40
			—0.1	5.5	—0.6	4.6
	F	27	3:37	9:55	16:22	22:32
			0.0	5.4	—0.5	4.6
	S	28	4:32	10:50	17:18	23:28
			0.2	5.1	—0.4	4.6
	S	29	5:31	11:45	18:05	. . .
			0.3	4.8	—0.2	. . .
E	M	30	0:25	6:33	12:42	19:00
☾			4.6	0.4	4.6	0.0
	Tu	31	1:22	7:37	13:43	19:56
			4.6	0.5	4.8	0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	4:55 0.3	10:55 5.7	18:00 0.4	23:18 4.6
	Tu	2	5:59 0.3	11:50 5.9	19:00 0.3	. . . . .
N	W	3	0:12 4.6	7:00 0.3	12:43 6.1	19:58 0.1
○ P	Th	4	1:08 4.6	7:58 0.2	13:34 6.2	20:50 0.0
	F	5	1:54 4.7	8:53 0.0	14:25 6.2	21:41 —0.2
	S	6	2:43 4.7	9:47 0.0	15:15 6.1	22:30 —0.2
	S	7	3:36 4.8	10:40 0.0	16:05 6.0	23:18 —0.3
	M	8	4:27 4.9	11:32 0.0	16:54 5.7	. . . . .
E	Tu	9	0:04 —0.3	5:20 5.0	12:23 0.0	17:45 5.5
	W	10	0:51 —0.2	6:14 5.0	13:16 0.1	18:38 5.2
☾	Th	11	1:40 —0.1	7:10 5.1	14:12 0.2	19:35 4.9
	F	12	2:30 0.0	8:08 5.2	15:07 0.3	20:38 4.7
	S	13	3:23 0.0	9:07 5.3	16:05 0.3	21:33 4.5
	S	14	4:18 0.1	10:06 5.4	17:02 0.3	22:28 4.4
	M	15	5:13 0.2	11:01 5.5	17:58 0.3	23:13 4.3
	Tu	16	6:07 0.3	11:50 5.5	18:51 0.2	. . . . .
S A	W	17	0:02 4.3	6:59 0.4	12:32 5.5	19:40 0.2
	Th	18	0:48 4.2	7:47 0.5	13:12 5.6	20:25 0.2
●	F	19	1:27 4.3	8:32 0.6	13:50 5.6	21:07 0.3
	S	20	2:06 4.3	9:12 0.6	14:25 5.6	21:47 0.3
	S	21	2:43 4.4	9:48 0.7	15:02 5.6	22:23 0.4
	M	22	3:20 4.6	10:21 0.8	15:38 5.6	22:58 0.5
	Tu	23	4:02 4.8	10:47 0.8	16:17 5.5	23:28 0.5
E	W	24	4:42 5.0	11:02 0.8	17:00 5.4	23:59 0.5
	Th	25	5:28 5.1	11:43 0.8	17:47 5.2	. . . . .
	F	26	0:26 0.5	6:20 5.2	12:38 0.8	18:40 4.9
☽	S	27	1:06 0.5	7:15 5.3	13:49 0.9	19:39 4.6
	S	28	2:00 0.6	8:17 5.4	15:10 0.9	20:45 4.4
	M	29	3:08 0.6	9:23 5.5	16:19 0.8	21:53 4.3
	Tu	30	4:28 0.6	10:30 5.6	17:38 0.6	22:57 4.3
N	W	31	5:41 0.5	11:32 5.8	18:42 0.4	23:55 4.5

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	6:47 0.3	12:28 6.0	19:39 0.1	. . . . .
○	F	2	0:46 4.6	7:45 0.1	13:21 6.1	20:30 —0.1
	S	3	1:38 4.8	8:39 —0.1	14:12 6.1	21:20 —0.3
	S	4	2:26 5.0	9:30 —0.2	14:59 6.0	22:05 —0.4
	M	5	3:16 5.1	10:21 —0.3	15:45 5.9	22:51 —0.4
E	Tu	6	4:05 5.3	11:10 —0.2	16:32 5.6	23:36 —0.3
	W	7	4:53 5.3	12:00 —0.1	17:18 5.3	. . . . .
	Th	8	0:20 —0.2	5:42 5.3	12:48 0.1	18:05 5.1
☾	F	9	1:06 —0.1	6:34 5.3	13:40 0.2	18:58 4.8
	S	10	1:56 0.1	7:28 5.3	14:33 0.4	19:52 4.5
	S	11	2:47 0.2	8:28 5.3	15:28 0.5	20:52 4.3
	M	12	3:43 0.3	9:27 5.3	16:26 0.5	21:52 4.2
S	Tu	13	4:39 0.4	10:25 5.3	17:22 0.5	22:45 4.2
A	W	14	5:36 0.4	11:16 5.4	18:16 0.4	23:35 4.3
	Th	15	6:28 0.4	12:08 5.5	19:07 0.3	. . . . .
	F	16	0:20 4.4	7:20 0.4	12:43 5.5	19:53 0.2
	S	17	1:02 4.5	8:02 0.5	13:23 5.6	20:37 0.2
●	S	18	1:40 4.6	8:43 0.5	14:00 5.6	21:15 0.3
	M	19	2:17 4.8	9:22 0.5	14:38 5.6	21:52 0.4
E	Tu	20	2:55 5.0	9:57 0.6	15:15 5.5	22:27 0.4
	W	21	3:34 5.2	10:27 0.6	15:44 5.4	22:57 0.5
	Th	22	4:15 5.3	10:52 0.7	16:37 5.2	23:22 0.5
	F	23	4:59 5.4	11:33 0.8	17:20 5.0	23:45 0.6
	S	24	5:48 5.4	12:28 0.8	18:12 4.7	. . . . .
☽	S	25	0:27 0.6	6:44 5.4	13:40 0.9	19:10 4.4
	M	26	1:28 0.6	7:47 5.3	14:54 1.0	20:20 4.2
N	Tu	27	2:53 0.8	8:57 5.3	16:08 0.9	21:33 4.1
	W	28	4:15 0.7	10:08 5.4	17:17 0.6	22:38 4.2
	Th	29	5:27 0.5	11:17 5.6	18:19 0.4	23:37 4.5

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	6:32 0.2	12:12 5.8	19:15 0.1	. . . . .
	S	2	0:22 4.8	7:29 0.0	13:05 5.9	20:05 —0.1
○	S	3	1:21 5.1	8:22 —0.3	13:52 5.9	20:52 —0.3
E	M	4	2:08 5.3	9:12 —0.4	14:37 5.8	21:38 —0.4
	Tu	5	2:54 5.5	10:01 —0.4	15:22 5.6	22:22 —0.3
	W	6	3:40 5.5	10:50 —0.3	16:08 5.5	23:05 —0.2
	Th	7	4:25 5.5	11:33 —0.1	16:46 5.1	23:49 —0.1
	F	8	5:08 5.5	12:21 0.1	17:31 4.9	. . . . .
	S	9	0:34 0.1	5:57 5.4	13:08 0.3	18:17 4.6
☾	S	10	1:22 0.3	6:48 5.3	13:58 0.5	19:10 4.4
S	M	11	2:12 0.4	7:45 5.2	14:52 0.6	20:12 4.2
A	Tu	12	3:08 0.5	8:45 5.2	15:48 0.6	21:15 4.2
	W	13	4:05 0.6	9:45 5.2	16:43 0.6	22:13 4.3
	Th	14	5:02 0.5	10:40 5.2	17:38 0.4	23:06 4.4
	F	15	5:55 0.5	11:29 5.4	18:29 0.3	23:51 4.6
	S	16	6:46 0.5	12:18 5.5	19:16 0.2	. . . . .
	S	17	0:36 4.8	7:32 0.4	12:55 5.5	20:00 0.2
●	M	18	1:14 5.0	8:15 0.3	13:34 5.5	20:40 0.2
E	Tu	19	1:52 5.2	8:56 0.4	14:14 5.5	21:20 0.3
	W	20	2:30 5.4	9:33 0.4	14:52 5.3	21:52 0.5
	Th	21	3:10 5.5	10:12 0.5	15:31 5.2	22:23 0.6
	F	22	3:50 5.6	10:58 0.5	16:12 5.0	22:42 0.6
	S	23	4:36 5.6	11:38 0.7	16:58 4.7	23:13 0.7
	S	24	5:25 5.6	12:33 0.8	17:50 4.4	. . . . .
N ☽	M	25	0:09 0.8	6:20 5.4	13:35 0.9	18:50 4.2
	Tu	26	1:31 0.8	7:25 5.3	14:45 0.9	20:01 4.1
	W	27	2:50 0.8	8:38 5.2	15:52 0.8	21:17 4.1
P	Th	28	4:07 0.6	9:52 5.2	16:55 0.6	22:23 4.4
	F	29	5:15 0.4	10:59 5.4	17:54 0.3	23:22 4.7
	S	30	6:16 0.1	11:55 5.5	18:48 0.0	. . . . .
	S	31	0:15 5.1	7:08 —0.1	12:44 5.6	19:38 —0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	1:02 5.3	8:05 −0.3	13:30 5.5	20:25 −0.2
	Tu	2	1:50 5.6	8:53 −0.4	14:30 5.4	21:10 −0.2
	W	3	2:32 5.7	9:40 −0.3	14:54 5.3	21:53 −0.1
	Th	4	3:15 5.7	10:25 −0.2	15:33 5.1	22:37 0.0
	F	5	3:57 5.7	11:10 0.0	16:13 4.8	23:20 0.1
	S	6	4:38 5.6	11:54 0.2	16:57 4.6	. . . . .
	S	7	0:08 0.3	5:20 5.5	12:38 0.4	17:40 4.4
S	M	8	0:49 0.5	6:08 5.3	13:25 0.6	18:33 4.3
☾ A	Tu	9	1:37 0.7	7:02 5.2	14:18 0.6	19:32 4.2
	W	10	2:31 0.8	8:00 5.1	15:06 0.6	20:33 4.3
	Th	11	3:27 0.8	9:00 5.1	16:00 0.5	21:37 4.4
	F	12	4:32 0.7	10:00 5.1	16:55 0.4	22:30 4.6
	S	13	5:16 0.6	10:52 5.2	17:46 0.3	23:20 4.9
	S	14	6:10 0.4	11:40 5.3	18:35 0.3	. . . . .
E	M	15	0:08 5.2	6:58 0.3	12:24 5.4	19:21 0.2
	Tu	16	0:45 5.4	7:45 0.2	13:06 5.3	20:08 0.3
●	W	17	1:25 5.6	8:31 0.2	13:48 5.2	20:48 0.4
	Th	18	2:07 5.8	9:15 0.2	14:27 5.1	21:22 0.5
	F	19	2:47 5.9	10:00 0.3	15:10 4.9	22:00 0.6
	S	20	3:30 5.9	10:50 0.4	15:53 4.7	22:34 0.7
	S	21	4:16 5.8	11:37 0.5	16:41 4.5	23:25 0.7
N P	M	22	5:07 5.7	12:31 0.6	17:34 4.3	. . . . .
	Tu	23	0:27 0.9	6:03 5.4	13:28 0.7	18:37 4.1
☽	W	24	1:35 0.8	7:08 5.2	14:28 0.6	19:48 4.2
	Th	25	2:45 0.7	8:20 5.1	15:30 0.5	21:00 4.4
	F	26	3:52 0.5	9:35 5.1	16:29 0.4	22:07 4.7
	S	27	4:57 0.3	10:38 5.2	17:25 0.2	23:04 5.0
E	S	28	5:57 0.1	11:32 5.2	18:19 0.0	23:57 5.4
	M	29	6:52 −0.1	12:20 5.2	19:10 −0.1	. . . . .
	Tu	30	0:43 5.6	7:45 −0.2	13:05 5.1	19:57 −0.1

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:27 5.7	8:34 −0.2	13:48 5.0	20:43 −0.0
	Th	2	2:09 5.8	9:20 −0.2	14:26 4.8	21:28 0.1
	F	3	2:50 5.8	10:04 0.0	15:07 4.7	22:10 0.2
	S	4	3:30 5.7	10:47 0.1	15:44 4.5	22:52 0.4
S	S	5	4:08 5.6	11:28 0.3	16:25 4.4	23:34 0.6
	M	6	4:48 5.5	12:10 0.5	17:10 4.4	. . . . .
A	Tu	7	0:15 0.8	5:31 5.4	12:52 0.5	17:58 4.3
	W	8	1:02 0.8	6:20 5.3	13:38 0.6	18:58 4.3
☾	Th	9	1:50 0.9	7:14 5.2	14:25 0.6	19:52 4.4
	F	10	2:45 0.9	8:12 5.1	15:17 0.5	20:58 4.6
	S	11	3:38 0.8	9:14 5.1	16:08 0.4	21:51 4.9
E	S	12	4:35 0.7	10:10 5.1	17:01 0.3	22:42 5.2
	M	13	5:29 0.5	11:02 5.2	17:52 0.3	23:30 5.5
	Tu	14	6:25 0.4	11:51 5.2	18:40 0.3	. . . . .
	W	15	0:16 5.7	7:18 0.2	12:37 5.1	19:27 0.4
●	Th	16	1:00 5.9	8:09 0.2	13:22 5.0	20:12 0.4
	F	17	1:43 6.0	8:59 0.2	14:06 4.8	21:00 0.4
	S	18	2:28 6.1	9:49 0.2	14:50 4.7	21:45 0.5
N P	S	19	3:15 6.1	10:39 0.2	15:37 4.5	22:34 0.6
	M	20	4:02 5.9	11:30 0.3	16:28 4.4	23:28 0.6
	Tu	21	4:52 5.7	12:21 0.3	17:23 4.3	. . . . .
	W	22	0:25 0.6	5:50 5.5	13:14 0.4	18:25 4.3
☽	Th	23	1:28 0.6	6:53 5.3	14:08 0.3	19:31 4.5
	F	24	2:30 0.5	8:00 5.1	15:04 0.3	20:38 4.7
E	S	25	3:33 0.4	9:10 5.0	16:00 0.2	21:42 5.0
	S	26	4:35 0.3	10:12 5.0	16:55 0.1	22:42 5.3
	M	27	5:35 0.1	11:05 4.9	17:48 0.0	23:33 5.5
	Tu	28	6:30 0.0	11:55 4.8	18:41 0.0	. . . . .
	W	29	0:21 5.7	7:25 −0.1	12:38 4.7	19:30 0.0
○	Th	30	1:05 5.8	8:12 −0.1	13:21 4.6	20:17 0.1
	F	31	1:49 5.7	8:58 0.0	14:00 4.4	21:08 0.2

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	2:26 5.7	9:42 0.1	14:40 4.4	21:47 0.5
	S	2	3:05 5.6	10:23 0.2	15:18 4.3	22:28 0.6
	M	3	3:40 5.6	11:08 0.4	16:00 4.3	23:07 0.8
A	Tu	4	4:18 5.5	11:42 0.4	16:41 4.4	23:46 0.8
	W	5	4:58 5.4	12:20 0.5	17:26 4.4	. . . . .
	Th	6	0:26 0.9	5:44 5.4	13:00 0.5	18:17 4.5
☾	F	7	1:04 0.9	6:38 5.2	13:42 0.5	19:10 4.7
	S	8	1:52 0.9	7:28 5.1	14:28 0.5	20:08 4.8
E	S	9	2:50 0.8	8:27 5.0	15:17 0.5	21:07 5.1
	M	10	3:47 0.7	9:28 4.9	16:10 0.4	22:15 5.4
	Tu	11	4:50 0.7	10:27 4.9	17:10 0.4	22:57 5.6
	W	12	5:57 0.5	11:18 4.8	18:00 0.4	23:49 5.8
	Th	13	6:52 0.4	12:10 4.8	18:54 0.4	. . . . .
	F	14	0:37 6.0	7:49 0.2	12:59 4.7	19:48 0.4
● N	S	15	1:25 6.2	8:43 0.1	13:47 4.6	20:40 0.3
P	S	16	2:18 6.2	9:35 0.0	14:38 4.6	21:32 0.3
	M	17	3:02 6.2	10:23 0.0	15:23 4.6	22:25 0.3
	Tu	18	3:50 6.0	11:16 0.0	16:15 4.6	23:18 0.3
	W	19	4:42 5.8	12:02 0.0	17:10 4.6	. . . . .
	Th	20	0:15 0.3	5:35 5.6	12:52 0.0	18:07 4.7
☽ E	F	21	1:10 0.3	6:35 5.3	13:43 0.1	19:08 4.8
	S	22	2:09 0.3	7:37 5.1	14:35 0.1	20:10 5.0
	S	23	3:08 0.3	8:40 4.8	15:28 0.1	21:12 5.2
	M	24	4:10 0.3	9:40 4.7	16:23 0.1	22:12 5.4
	Tu	25	5:08 0.2	10:36 4.6	17:18 0.1	23:10 5.5
	W	26	6:05 0.1	11:25 4.5	18:13 0.1	23:58 5.6
	Th	27	6:59 0.1	12:10 4.4	19:05 0.2	. . . . .
S	F	28	0:42 5.7	7:48 0.1	12:56 4.3	19:55 0.2
○	S	29	1:24 5.6	8:34 0.1	13:38 4.3	20:40 0.4
	S	30	2:02 5.6	9:18 0.2	14:17 4.3	21:23 0.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	2:40 5.6	9:58 0.3	14:55 4.3	22:08 0.7
	Tu	2	3:16 5.5	10:36 0.4	15:33 4.4	22:40 0.9
	W	3	3:50 5.5	11:13 0.4	16:14 4.5	23:14 0.9
	Th	4	4:28 5.5	11:49 0.4	16:55 4.7	23:45 0.8
	F	5	5:10 5.4	12:22 0.5	17:40 4.8	. . . . .
E	S	6	0:07 0.8	5:57 5.3	12:58 0.4	18:31 5.0
☾	S	7	0:54 0.8	6:48 5.1	13:34 0.5	19:25 5.1
	M	8	1:47 0.8	7:45 4.9	14:15 0.5	20:24 5.3
	Tu	9	3:00 0.8	8:47 4.7	15:12 0.5	21:25 5.5
	W	10	4:09 0.8	9:50 4.6	16:15 0.5	22:24 5.6
	Th	11	5:23 0.7	10:50 4.5	17:22 0.5	23:23 5.8
	F	12	6:30 0.5	11:45 4.5	18:30 0.5	. . . . .
N	S	13	0:18 6.0	7:30 0.3	12:40 4.6	19:30 0.4
● P	S	14	1:10 6.2	8:24 0.1	13:30 4.7	20:27 0.2
	M	15	2:00 6.2	9:15 0.0	14:18 4.8	21:20 0.2
	Tu	16	2:50 6.2	10:05 −0.2	15:08 4.8	22:12 0.0
	W	17	3:39 6.0	10:52 −0.2	15:59 5.0	23:05 −0.1
	Th	18	4:28 5.8	11:38 −0.2	16:52 5.0	23:57 0.0
E	F	19	5:18 5.6	12:25 −0.2	17:44 5.1	. . . . .
	S	20	0:50 0.1	6:10 5.3	13:14 −0.1	18:39 5.2
☽	S	21	1:45 0.2	7:07 5.0	14:04 0.0	19:37 5.2
	M	22	2:40 0.3	8:07 4.7	14:57 0.1	20:38 5.3
	Tu	23	3:40 0.4	9:06 4.5	15:53 0.2	21:40 5.3
	W	24	4:38 0.4	10:03 4.3	16:49 0.2	22:39 5.4
	Th	25	5:35 0.3	10:57 4.2	17:45 0.2	23:31 5.5
S	F	26	6:30 0.2	11:47 4.3	18:40 0.3	. . . . .
	S	27	0:18 5.5	7:20 0.2	12:38 4.3	19:30 0.3
○ A	S	28	1:00 5.5	8:08 0.1	13:15 4.3	20:16 0.4
	M	29	1:39 5.5	8:51 0.2	13:54 4.4	20:59 0.5
	Tu	30	2:15 5.5	9:31 0.2	14:31 4.5	21:38 0.6
	W	31	2:49 5.5	10:08 0.3	15:08 4.6	22:13 0.7

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:25 5.5	10:42 0.4	15:45 4.8	22:43 0.8
E	F	2	4:02 5.4	11:13 0.5	16:24 5.0	23:00 0.8
	S	3	4:42 5.4	11:42 0.5	17:07 5.2	23:20 0.8
	S	4	5:25 5.2	12:00 0.5	17:54 5.3	. . . . .
☾	M	5	0:16 0.8	6:13 5.0	12:30 0.5	18:48 5.3
	Tu	6	1:05 0.9	7:08 4.7	13:17 0.6	19:45 5.4
	W	7	2:21 0.9	8:11 4.5	14:20 0.6	20:50 5.4
	Th	8	3:47 0.9	9:20 4.3	15:48 0.7	21:57 5.5
N	F	9	5:02 0.8	10:25 4.3	17:08 0.6	23:02 5.7
	S	10	6:09 0.6	11:26 4.4	18:13 0.5	. . . . .
	S	11	0:01 5.9	7:09 0.3	12:21 4.6	19:17 0.2
P ●	M	12	0:55 6.0	8:02 0.0	13:13 4.8	20:12 0.0
	Tu	13	1:46 6.1	8:52 −0.2	14:08 5.0	21:05 −0.2
	W	14	2:34 6.0	9:40 −0.3	14:50 5.2	21:57 −0.3
E	Th	15	3:22 5.9	10:25 −0.3	15:40 5.4	22:46 −0.3
	F	16	4:08 5.7	11:12 −0.3	16:31 5.4	23:35 −0.2
	S	17	4:55 5.4	11:57 −0.2	17:18 5.4	. . . . .
	S	18	0:26 0.0	5:42 5.1	12:48 −0.1	18:08 5.4
☽	M	19	1:17 0.2	6:32 4.8	13:33 0.1	19:03 5.3
	Tu	20	2:12 0.3	7:30 4.5	14:26 0.2	20:03 5.3
	W	21	3:18 0.4	8:30 4.3	15:22 0.3	21:05 5.2
S	Th	22	4:05 0.5	9:32 4.2	16:20 0.3	22:06 5.3
	F	23	5:02 0.4	10:28 4.2	17:17 0.4	23:00 5.3
	S	24	5:57 0.3	11:20 4.3	18:12 0.3	23:48 5.4
A	S	25	6:48 0.2	12:08 4.4	19:02 0.3	. . . . .
	M	26	0:31 5.5	7:35 0.2	12:50 4.5	19:48 0.4
○	Tu	27	1:11 5.5	8:18 0.2	13:30 4.7	20:30 0.4
	W	28	1:48 5.5	8:58 0.2	14:06 4.8	21:10 0.5
E	Th	29	2:23 5.5	9:36 0.3	14:42 5.0	21:45 0.6
	F	30	2:58 5.4	10:09 0.6	15:17 5.2	22:15 0.7
	S	31	3:35 5.3	10:38 0.5	15:55 5.3	22:50 0.7

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:14 5.2	10:52 0.6	16:37 5.4	23:03 0.8
	M	2	4:57 5.0	11:05 0.6	17:24 5.5	23:48 0.8
	Tu	3	5:43 4.8	11:48 0.6	18:14 5.5	. . . . .
☾	W	4	0:47 0.9	6:38 4.5	12:45 0.7	19:14 5.4
N	Th	5	2:10 1.0	7:42 4.2	13:47 0.8	20:21 5.3
	F	6	3:29 1.0	8:57 4.1	15:31 0.8	21:33 5.3
	S	7	4:52 0.8	10:07 4.2	16:51 0.6	22:43 5.5
	S	8	5:47 0.5	11:07 4.4	18:00 0.3	23:45 5.6
P	M	9	6:45 0.3	12:05 4.8	19:01 0.0	. . . . .
●	Tu	10	0:38 5.8	7:37 0.0	12:56 5.1	19:57 −0.2
E	W	11	1:28 5.8	8:27 −0.2	13:44 5.4	20:48 −0.3
	Th	12	2:14 5.8	9:12 −0.3	14:32 5.6	21:38 −0.4
	F	13	2:59 5.6	9:59 −0.3	15:17 5.7	22:25 −0.4
	S	14	3:43 5.4	10:42 −0.2	16:04 5.7	23:13 −0.2
	S	15	4:27 5.2	11:28 −0.1	16:50 5.6	. . . . .
	M	16	0:02 0.0	5:11 4.9	12:13 0.1	17:37 5.5
	Tu	17	0:50 0.2	5:59 4.6	13:02 0.2	18:28 5.4
☽ S	W	18	1:40 0.4	6:52 4.4	13:54 0.4	19:25 5.2
	Th	19	2:34 0.5	7:53 4.2	14:50 0.5	20:24 5.1
	F	20	3:28 0.5	8:57 4.2	15:47 0.5	21:27 5.2
A	S	21	4:24 0.5	9:57 4.3	16:45 0.5	22:23 5.2
	S	22	5:18 0.4	10:50 4.5	17:38 0.4	23:13 5.3
	M	23	6:09 0.3	11:38 4.7	18:29 0.4	23:58 5.3
	Tu	24	6:58 0.2	12:21 4.9	19:18 0.3	. . . . .
	W	25	0:40 5.4	7:42 0.2	13:00 5.0	20:18 0.3
E ○	Th	26	1:20 5.4	8:22 0.3	13:37 5.2	20:41 0.4
	F	27	1:59 5.3	9:01 0.4	14:13 5.4	21:20 0.4
	S	28	2:33 5.2	9:35 0.5	14:50 5.5	21:56 0.5
	S	29	3:10 5.1	10:02 0.6	15:31 5.6	22:31 0.6
	M	30	3:50 4.9	10:40 0.6	16:13 5.7	23:12 0.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.), and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	4:33 4.7	10:27 0.7	16:58 5.6	23:59 0.8
	W	2	5:21 4.5	11:11 0.8	17:50 5.5	. . . . .
N ☾	Th	3	0:58 0.9	6:17 4.3	12:20 0.9	18:50 5.3
	F	4	2:07 0.9	7:22 4.1	14:06 0.9	19:59 5.2
	S	5	3:14 0.9	8:40 4.1	15:28 0.8	21:13 5.2
	S	6	4:21 0.7	9:50 4.4	16:40 0.6	22:26 5.3
P	M	7	5:21 0.4	10:52 4.7	17:44 0.2	23:26 5.4
	Tu	8	6:18 0.2	11:47 5.1	18:44 0.0	. . . . .
E	W	9	0:18 5.5	7:10 0.0	12:38 5.4	19:38 −0.2
●	Th	10	1:06 5.5	7:58 −0.1	13:25 5.6	20:30 −0.4
	F	11	1:50 5.4	8:45 −0.2	14:10 5.8	21:20 −0.6
	S	12	2:33 5.2	9:32 −0.2	14:55 5.8	22:06 −0.3
	S	13	3:15 5.0	10:16 0.0	15:40 5.8	22:52 −0.1
	M	14	3:58 4.8	11:00 0.1	16:22 5.7	23:37 0.1
	Tu	15	4:40 4.6	11:50 0.2	17:05 5.6	. . . . .
S	W	16	0:23 0.2	5:27 4.5	12:34 0.4	17:53 5.4
☽	Th	17	1:10 0.4	6:18 4.3	13:22 0.6	18:45 5.2
	F	18	1:58 0.5	7:16 4.3	14:17 0.7	19:42 5.1
A	S	19	2:49 0.5	8:16 4.3	15:10 0.7	20:42 5.1
	S	20	3:43 0.5	9:18 4.5	16:06 0.6	21:40 5.1
	M	21	4:36 0.4	10:15 4.7	17:00 0.5	22:33 5.1
	Tu	22	5:26 0.3	11:02 4.9	17:52 0.4	23:21 5.2
E	W	23	6:15 0.2	11:48 5.2	18:42 0.3	. . . . .
	Th	24	0:06 5.3	7:02 0.3	12:29 5.4	19:28 0.3
○	F	25	0:48 5.2	7:45 0.3	13:10 5.6	20:13 0.3
	S	26	1:28 5.1	8:28 0.4	13:47 5.7	20:57 0.3
	S	27	2:07 5.0	9:08 0.5	14:27 5.8	21:40 0.4
	M	28	2:48 4.8	9:33 0.6	15:08 5.9	22:25 0.5
	Tu	29	3:30 4.7	9:46 0.7	15:58 5.9	23:12 0.5
N	W	30	4:15 4.5	10:18 0.8	16:40 5.7	. . . . .
	Th	31	0:02 0.6	5:06 4.3	11:25 0.8	17:33 5.5

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	0:55 0.7	6:02 4.2	12:55 0.8	18:32 5.3
	S	2	1:55 0.7	7:10 4.2	14:06 0.8	19:42 5.1
P	S	3	2:55 0.6	8:22 4.3	15:17 0.7	20:55 5.1
	M	4	3:56 0.5	9:32 4.6	16:23 0.5	22:05 5.1
E	Tu	5	4:53 0.3	10:34 5.0	17:25 0.2	23:03 5.1
	W	6	5:48 0.1	11:28 5.3	18:25 0.0	23:56 5.1
	Th	7	6:41 0.0	12:20 5.6	19:20 −0.2	. . . . .
●	F	8	0:42 5.0	7:32 −0.1	13:05 5.8	20:12 −0.2
	S	9	1:27 5.0	8:20 −0.1	13:50 5.9	21:00 −0.2
	S	10	2:08 4.8	9:07 0.0	14:33 5.9	21:46 −0.1
	M	11	2:48 4.7	9:52 0.2	15:15 5.8	22:30 0.0
S	Tu	12	3:32 4.5	10:37 0.3	15:57 5.8	23:13 0.1
	W	13	4:13 4.4	11:22 0.4	16:37 5.6	23:56 0.3
	Th	14	4:58 4.4	12:05 0.6	17:20 5.4	. . . . .
	F	15	0:39 0.4	5:46 4.4	12:50 0.7	18:06 5.3
A ☽	S	16	1:22 0.5	6:39 4.4	13:40 0.8	18:48 5.2
	S	17	2:10 0.4	7:34 4.4	14:29 0.8	19:58 5.1
	M	18	2:58 0.4	8:33 4.6	15:22 0.7	20:52 5.0
E	Tu	19	3:50 0.4	9:31 4.9	16:15 0.7	21:51 5.0
	W	20	4:39 0.4	10:24 5.2	17:10 0.6	22:41 5.0
	Th	21	5:29 0.4	11:12 5.4	18:03 0.5	23:30 5.0
	F	22	6:17 0.4	11:57 5.6	18:56 0.4	. . . . .
○	S	23	0:17 5.0	7:05 0.4	12:42 5.8	19:48 0.3
	S	24	1:03 4.9	7:50 0.5	13:24 6.0	20:37 0.2
	M	25	1:45 4.7	8:35 0.5	14:07 6.1	21:27 0.3
N	Tu	26	2:28 4.6	9:17 0.6	14:52 6.1	22:15 0.3
	W	27	3:19 4.5	10:07 0.6	15:38 6.0	23:02 0.3
P	Th	28	4:02 4.5	10:57 0.7	16:28 5.8	23:53 0.4
	F	29	4:53 4.4	11:53 0.7	17:20 5.6	. . . . .
	S	30	0:43 0.4	5:52 4.4	12:52 0.6	18:20 5.3

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	1:38 0.4	6:55 4.5	13:55 0.7	19:24 5.1
E	M	2	2:32 0.4	8:00 4.6	14:59 0.5	20:32 5.0
	Tu	3	3:28 0.3	9:07 4.9	16:03 0.4	21:40 4.9
	W	4	4:24 0.2	10:10 5.2	17:06 0.2	22:37 4.8
	Th	5	5:20 0.1	11:07 5.5	18:08 0.1	23:28 4.8
	F	6	6:16 0.1	11:59 5.7	19:00 0.0	. . . . .
	S	7	0:17 4.7	7:07 0.1	12:47 5.8	19:51 −0.1
●	S	8	1:02 4.6	7:57 0.1	13:30 5.8	20:40 −0.1
S	M	9	1:45 4.5	8:45 0.2	14:13 5.8	21:26 0.0
	Tu	10	2:26 4.4	9:31 0.3	14:53 5.7	22:08 0.1
	W	11	3:07 4.3	10:13 0.5	15:31 5.6	22:50 0.2
	Th	12	3:43 4.4	10:55 0.6	16:10 5.5	23:29 0.3
	F	13	4:30 4.4	11:37 0.7	16:47 5.7	. . . . .
A	S	14	0:08 0.3	5:17 4.5	12:15 0.8	17:30 5.4
	S	15	0:47 0.4	6:02 4.6	12:59 0.8	18:17 5.3
☽	M	16	1:30 0.4	6:53 4.7	13:43 0.8	19:08 5.1
E	Tu	17	2:09 0.4	7:47 4.9	14:30 0.8	20:04 5.0
	W	18	2:56 0.4	8:43 5.1	15:49 0.8	21:02 4.9
	Th	19	3:47 0.4	9:40 5.3	16:27 0.7	22:00 4.8
	F	20	4:37 0.5	10:37 5.5	17:26 0.6	22:55 4.7
	S	21	5:32 0.5	11:27 5.7	18:26 0.5	23:47 4.7
	S	22	6:28 0.5	12:16 5.9	19:24 0.4	. . . . .
N ○	M	23	0:36 4.6	7:22 0.5	13:04 6.1	20:19 0.2
	Tu	24	1:22 4.6	8:14 0.5	13:52 6.2	21:10 0.2
P	W	25	2:11 4.6	9:08 0.4	14:39 6.2	22:00 0.1
	Th	26	3:00 4.6	9:58 0.4	15:28 6.1	22:48 0.1
	F	27	3:49 4.6	10:50 0.4	16:17 5.9	23:17 0.1
	S	28	4:41 4.7	11:45 0.3	17:07 5.6	. . . . .
	S	29	0:25 0.1	5:37 4.7	12:40 0.3	18:03 5.4
E ☾	M	30	1:14 0.1	6:34 4.8	13:38 0.3	19:05 5.1
	Tu	31	2:05 0.1	7:36 5.0	14:38 0.4	20:09 4.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case substract it.

The time used is Eastern Standard, 75th meridian W.: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:07	9:14	16:18	23:24
			0.7	—0.1	1.0	0.2
	Tu	2	4:04	10:08	17:12	. . .
			0.7	—0.1	1.6	. . .
N	W	3	0:20	5:04	11:01	18:04
			0.2	0.7	—0.2	1.7
○ P	Th	4	1:09	6:00	11:56	18:54
			0.2	0.7	—0.2	1.7
	F	5	1:57	6:55	12:50	19:43
			0.1	0.8	—0.2	1.7
	S	6	2:42	7:50	13:46	20:31
			0.1	0.8	—0.1	1.6
	S	7	3:25	8:47	14:46	21:18
			0.0	0.9	—0.1	1.5
	M	8	4:04	9:43	15:47	22:04
			0.0	1.0	0.0	1.3
E	Tu	9	4:44	10:42	16:52	23:00
			0.0	1.1	0.1	1.1
	W	10	5:27	11:42	18:07	23:47
			0.0	1.1	0.2	1.0
☾	Th	11	6:11	12:40	19:27	. . .
			0.0	1.2	0.3	. . .
	F	12	0:35	6:58	13:44	20:44
			0.7	0.0	1.3	0.3
	S	13	1:25	7:44	14:47	22:00
			0.7	0.0	1.3	0.3
	S	14	2:21	8:34	15:44	23:07
			0.6	0.0	1.4	0.3
	M	15	3:14	9:24	16:36	. . .
			0.5	0.0	1.4	. . .
	Tu	16	0:01	4:09	10:10	17:20
			0.3	0.5	0.0	1.5
S A	W	17	0:44	4:58	10:53	18:00
			0.3	0.5	0.0	1.5
	Th	18	1:19	5:46	11:34	18:34
			0.2	0.6	0.0	1.5
●	F	19	1:50	6:30	12:14	19:07
			0.2	0.6	0.1	1.4
	S	20	2:18	7:14	12:54	19:40
			0.2	0.7	0.1	1.4
	S	21	2:43	7:56	13:33	20:11
			0.1	0.8	0.1	1.3
	M	22	3:07	8:38	14:12	20:47
			0.1	0.8	0.2	1.3
	Tu	23	3:32	9:21	14:54	21:27
			0.1	0.9	0.2	1.2
E	W	24	4:02	10:09	15:44	22:04
			0.0	1.0	0.3	1.1
	Th	25	4:34	10:56	16:45	22:46
			0.0	1.1	0.3	1.0
	F	26	5:10	11:51	18:02	23:32
			0.0	1.2	0.4	0.9
☽	S	27	5:53	12:50	19:30	. . .
			0.0	1.3	0.4	. . .
	S	28	0:28	6:44	13:54	20:58
			0.8	—0.1	1.3	0.4
	M	29	1:28	7:42	14:58	22:10
			0.6	—0.1	1.4	0.4
	Tu	30	2:34	8:44	16:00	23:11
			0.5	—0.1	1.5	0.3
N	W	31	3:42	9:49	16:57	. . .
			0.6	—0.1	1.6	. . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	0:02	4:47	10:50	17:50
			0.2	0.7	—0.2	1.6
○	F	2	0:47	5:46	11:50	18:39
			0.2	0.8	—0.2	1.6
	S	3	1:30	6:40	12:48	19:26
			0.1	0.9	—0.2	1.5
	S	4	2:10	7:34	13:43	20:10
			0.0	1.0	—0.1	1.4
	M	5	2:47	8:28	14:40	20:54
			0.0	1.1	—0.1	1.3
E	Tu	6	3:22	9:20	15:37	21:41
			0.0	1.2	0.0	1.2
	W	7	4:00	10:14	16:40	22:21
			0.0	1.2	0.1	1.0
	Th	8	4:40	11:06	17:50	23:06
			0.0	1.3	0.2	0.9
☾	F	9	5:22	12:05	19:01	23:48
			0.0	1.3	0.3	0.7
	S	10	6:08	13:08	20:20	. . .
			0.0	1.3	0.3	. . .
	S	11	0:40	7:00	14:12	21:38
			0.6	0.0	1.3	0.4
	M	12	1:37	7:56	15:12	22:43
			0.6	0.0	1.3	0.3
S	Tu	13	2:45	8:54	16:04	23:32
			0.5	0.1	1.3	0.3
A	W	14	3:44	9:48	16:49	. . .
			0.5	0.1	1.4	. . .
	Th	15	0:08	4:41	10:39	17:29
			0.2	0.6	0.1	1.4
	F	16	0:40	5:28	11:25	18:04
			0.2	0.7	0.1	1.4
	S	17	1:08	6:12	12:06	18:37
			0.2	0.7	0.1	1.3
●	S	18	1:32	6:57	12:46	19:09
			0.1	0.8	0.1	1.3
	M	19	1:56	7:32	13:24	19:47
			0.1	0.9	0.1	1.2
E	Tu	20	2:20	8:13	14:04	20:24
			0.0	1.0	0.1	1.2
	W	21	2:46	8:56	14:48	20:58
			0.0	1.1	0.2	1.1
	Th	22	3:14	9:36	15:40	21:35
			0.0	1.2	0.2	1.0
	F	23	3:48	10:24	16:40	22:16
			0.0	1.2	0.3	0.9
	S	24	4:24	11:20	17:54	23:04
			0.0	1.3	0.3	0.8
☽	S	25	5:12	12:23	19:21	23:59
			0.0	1.3	0.4	0.6
	M	26	6:08	13:30	20:42	. . .
			0.0	1.4	0.4	. . .
N	Tu	27	1:06	7:16	14:38	21:52
			0.6	0.0	1.4	0.3
	W	28	2:18	8:33	15:40	22:47
			0.7	—0.1	1.4	0.3
	Th	29	3:31	9:46	16:38	23:34
			0.7	—0.1	1.4	0.2

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:35	10:51	17:30	. . .
			0.8	—0.1	1.4	. . .
	S	2	0:16	5:33	11:50	18:20
			0.1	1.0	—0.2	1.4
○	S	3	0:54	6:27	12:46	19:04
			0.1	1.1	—0.2	1.3
E	M	4	1:30	7:18	13:40	19:50
			0.0	1.2	—0.1	1.2
	Tu	5	2:08	8:07	14:33	20:30
			0.0	1.3	—0.1	1.1
	W	6	2:38	8:52	15:29	21:08
			0.0	1.3	0.0	1.0
	Th	7	3:15	9:40	16:27	21:46
			0.0	1.4	0.1	0.9
	F	8	3:51	10:34	17:29	22:28
			0.0	1.4	0.2	0.8
	S	9	4:33	11:29	18:35	23:10
			0.0	1.3	0.3	0.7
☾	S	10	5:20	12:28	19:46	. . .
			0.0	1.3	0.4	. . .
S	M	11	0:08	6:15	13:28	20:58
			0.6	0.1	1.3	0.3
A	Tu	12	1:12	7:20	14:26	21:56
			0.6	0.1	1.2	0.3
	W	13	2:20	8:27	15:20	22:40
			0.6	0.2	1.2	0.3
	Th	14	3:24	9:28	16:06	23:15
			0.6	0.2	1.2	0.2
	F	15	4:20	10:22	16:48	23:48
			0.7	0.1	1.2	0.2
	S	16	5:07	11:10	17:26	. . .
			0.8	0.1	1.2	. . .
	S	17	0:14	5:49	11:56	18:08
			0.1	0.9	0.1	1.2
●	M	18	0:38	6:30	12:37	18:45
			0.1	1.0	0.1	1.1
E	Tu	19	1:04	7:08	13:20	19:20
			0.1	1.1	0.1	1.1
	W	20	1:31	7:48	14:08	19:56
			0.0	1.2	0.1	1.0
	Th	21	2:01	8:23	14:50	20:33
			0.0	1.3	0.1	1.0
	F	22	2:34	9:10	15:44	21:13
			0.0	1.4	0.2	0.9
	S	23	3:08	10:01	16:43	21:58
			0.0	1.4	0.3	0.8
	S	24	3:52	10:58	17:52	22:48
			0.0	1.4	0.3	0.7
N ☽	M	25	4:43	12:00	19:09	23:50
			0.0	1.4	0.3	0.6
	Tu	26	5:48	13:08	20:24	. . .
			0.0	1.3	0.3	. . .
	W	27	0:01	7:11	14:14	21:22
			0.7	0.0	1.3	0.3
P	Th	28	2:17	8:32	15:18	22:14
			0.8	0.0	1.3	0.2
	F	29	3:25	9:46	16:14	22:58
			0.9	0.0	1.3	0.1
	S	30	4:26	10:50	17:08	23:36
			1.0	—0.1	1.2	0.1
	S	31	5:20	11:50	17:58	. . .
			1.1	—0.1	1.2	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.6 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th Meridian W.: 0^h is midnight, 12^h is noon, all hours less than 12 are in the forenoon (a. m), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	0:10 0.0	6:11 1.3	12:44 —0.1	18:40 1.1
○	Tu	2	0:45 0.0	6:57 1.4	13:38 —0.1	19:20 1.0
	W	3	1:18 0.0	7:39 1.4	14:29 0.0	19:58 0.9
	Th	4	1:54 0.0	8:26 1.5	15:21 0.1	20:34 0.8
	F	5	2:30 0.0	9:14 1.5	16:14 0.2	21:14 0.7
	S	6	3:07 0.0	10:02 1.4	17:08 0.3	21:56 0.7
	S	7	3:46 0.1	10:51 1.3	18:06 0.3	22:44 0.6
S	M	8	4:33 0.1	11:44 1.3	19:07 0.3	23:41 0.6
☾	Tu	9	5:31 0.2	12:36 1.2	20:03 0.3	. . . . .
A	W	10	0:51 0.6	6:44 0.2	13:30 1.2	20:50 0.3
	Th	11	1:58 0.7	7:56 0.2	14:22 1.1	21:35 0.2
	F	12	3:00 0.8	9:02 0.2	15:15 1.1	22:10 0.2
	S	13	3:52 0.9	10:02 0.2	16:07 1.1	22:41 0.1
	S	14	4:38 1.0	10:54 0.2	16:48 1.0	23:13 0.1
E	M	15	5:21 1.1	11:41 0.1	17:28 1.0	23:43 0.0
	Tu	16	5:57 1.2	12:29 0.1	18:10 1.0	. . . . .
●	W	17	0:14 0.0	6:36 1.3	13:15 0.1	18:48 0.9
	Th	18	0:46 0.0	7:18 1.4	14:04 0.1	19:28 0.9
	F	19	1:20 —0.1	8:04 1.5	14:54 0.1	20:11 0.8
	S	20	2:00 —0.1	8:53 1.5	15:48 0.2	20:56 0.8
	S	21	2:41 —0.1	9:44 1.5	16:46 0.2	21:48 0.7
N	M	22	3:31 0.0	10:40 1.4	17:48 0.2	22:44 0.7
P	Tu	23	4:31 0.0	11:41 1.4	18:50 0.2	23:51 0.7
☽	W	24	5:47 0.1	12:44 1.3	19:50 0.2	. . . . .
	Th	25	0:01 0.7	7:13 0.1	13:46 1.2	20:42 0.2
	F	26	2:12 0.9	8:32 0.1	14:50 1.1	21:29 0.1
	S	27	3:16 1.0	9:47 0.1	15:52 1.1	22:10 0.1
E	S	28	4:15 1.2	10:52 0.0	16:40 1.0	22:48 0.1
	M	29	4:58 1.3	11:51 0.0	17:25 0.9	23:25 0.0
	Tu	30	5:47 1.4	12:46 0.0	18:07 0.8	. . . . .

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	0:01 0.0	6:34 1.5	13:37 0.1	18:46 0.8
	Th	2	0:37 0.0	7:19 1.5	14:25 0.1	19:24 0.7
	F	3	1:13 0.0	8:02 1.5	15:14 0.2	20:02 0.7
	S	4	1:50 0.0	8:46 1.5	16:02 0.2	20:45 0.7
S	S	5	2:28 0.0	9:30 1.4	16:50 0.2	21:32 0.6
	M	6	3:09 0.1	10:13 1.3	17:34 0.2	22:27 0.6
A	Tu	7	3:57 0.2	10:58 1.2	18:17 0.2	23:25 0.7
	W	8	4:53 0.3	11:44 1.2	19:00 0.2	. . . . .
☾	Th	9	0:28 0.7	6:03 0.3	12:37 1.1	19:42 0.2
	F	10	1:30 0.8	7:20 0.3	13:34 1.0	20:21 0.1
	S	11	2:27 0.9	8:30 0.3	14:23 1.0	21:00 0.1
E	S	12	3:15 1.0	9:35 0.3	15:12 0.9	21:37 0.0
	M	13	3:58 1.2	10:35 0.2	15:58 0.9	22:13 0.0
	Tu	14	4:43 1.3	11:28 0.2	16:45 0.9	22:50 0.0
	W	15	5:28 1.4	12:20 0.1	17:30 0.8	23:28 —0.1
●	Th	16	6:12 1.5	13:10 0.1	18:17 0.8	. . . . .
	F	17	0:10 —0.1	7:00 1.6	14:03 0.1	19:03 0.8
	S	18	0:52 —0.1	7:48 1.6	14:54 0.1	19:51 0.7
N	S	19	1:38 —0.1	8:38 1.6	15:47 0.2	20:43 0.7
P	M	20	2:28 —0.1	9:30 1.5	16:37 0.2	21:40 0.7
	Tu	21	3:25 0.0	10:24 1.5	17:30 0.1	22:42 0.8
	W	22	4:31 0.1	11:20 1.4	18:20 0.1	23:48 0.8
☽	Th	23	5:50 0.1	12:17 1.2	19:10 0.1	. . . . .
	F	24	0:55 0.9	7:10 0.2	13:23 1.1	19:56 0.1
E	S	25	2:01 1.1	8:30 0.2	14:20 1.0	20:41 0.1
	S	26	2:55 1.2	9:46 0.1	15:15 0.9	21:23 0.0
	M	27	3:52 1.3	10:50 0.1	16:04 0.8	22:05 0.0
	Tu	28	4:45 1.4	11:50 0.1	16:48 0.7	22:44 0.0
	W	29	5:33 1.5	12:44 0.2	17:32 0.7	23:23 0.0
○	Th	30	6:18 1.6	13:33 0.2	18:13 0.7	. . . . .
	F	31	0:02 0.0	7:01 1.6	14:20 0.2	18:55 0.7

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	0:40 0.0	7:42 1.5	15:02 0.2	19:38 0.6
	S	2	1:18 0.1	8:20 1.4	15:42 0.3	20:24 0.6
	M	3	2:00 0.2	8:58 1.3	16:19 0.2	21:12 0.6
A	Tu	4	2:48 0.2	9:37 1.2	16:52 0.1	22:15 0.7
	W	5	3:28 0.3	10:15 1.2	17:25 0.1	23:00 0.8
	Th	6	4:23 0.4	11:00 1.1	18:00 0.1	23:56 0.9
☾	F	7	5:28 0.4	11:48 1.0	18:38 0.0	. . . . .
	S	8	0:51 1.1	6:39 0.4	12:35 0.9	19:17 0.0
E	S	9	1:45 1.2	7:55 0.3	13:25 0.8	19:58 0.0
	M	10	2:34 1.3	9:11 0.2	14:17 0.8	20:38 0.0
	Tu	11	3:25 1.3	10:15 0.2	15:10 0.7	21:21 —0.1
	W	12	4:17 1.4	11:14 0.1	16:03 0.7	22:10 —0.1
	Th	13	5:06 1.7	12:10 0.1	16:55 0.7	22:53 —0.1
	F	14	5:57 1.7	13:03 0.1	17:50 0.7	23:42 —0.1
●	S	15	6:45 1.7	13:55 0.1	18:42 0.7	. . . . .
N	S	16	0:32 —0.1	7:35 1.6	14:43 0.1	19:37 0.8
P	M	17	1:25 0.0	8:24 1.6	15:30 0.0	20:32 0.8
	Tu	18	2:22 0.0	9:15 1.4	16:16 0.0	21:28 0.9
	W	19	3:28 0.1	10:04 1.3	17:00 0.0	22:30 1.0
	Th	20	4:31 0.2	10:55 1.1	17:43 0.1	23:33 1.1
☽	F	21	5:45 0.2	11:56 1.0	18:27 0.1	. . . . .
E	S	22	0:39 1.2	7:04 0.2	12:48 0.8	19:12 0.0
	S	23	1:35 1.3	8:25 0.2	13:40 0.7	19:57 0.0
	M	24	2:38 1.4	9:38 0.2	14:32 0.6	20:43 0.0
	Tu	25	3:36 1.5	10:46 0.3	15:27 0.6	21:28 0.0
	W	26	4:30 1.5	11:47 0.3	16:14 0.6	22:13 0.0
	Th	27	5:18 1.5	12:41 0.3	17:00 0.7	22:56 0.0
S	F	28	6:02 1.5	13:26 0.2	17:48 0.7	23:38 0.1
○	S	29	6:48 1.5	14:05 0.1	18:33 0.6	. . . . .
	S	30	0:18 —0.1	7:19 1.4	14:40 0.1	19:18 0.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.6 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.							AUGUST.							SEPTEMBER.						
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	1:01 0.0	7:55 1.4	15:13 0.2	20:08 0.7		Th	1	2:08 0.2	8:32 1.2	15:17 0.1	21:07 0.9		S	1	3:25 0.3	9:10 1.0	15:25 —0.1	22:00 1.2
	Tu	2	1:43 0.1	8:28 1.3	15:40 0.2	20:50 0.7	E	F	2	2:50 0.2	9:10 1.2	15:45 0.0	21:52 1.0		M	2	4:20 0.3	9:50 0.9	16:00 —0.1	22:55 1.2
	W	3	2:26 0.2	9:02 1.3	16:06 0.1	21:38 0.8		S	3	3:36 0.3	9:45 1.1	16:14 0.0	22:37 1.1		Tu	3	5:27 0.4	10:37 0.9	16:45 —0.1	23:55 1.3
	Th	4	3:08 0.2	9:42 1.2	16:37 0.1	22:27 0.8		S	4	4:30 0.4	10:25 1.0	16:47 —0.1	23:28 1.1	☾	W	4	6:45 0.5	11:32 0.8	17:40 —0.1	. . . . .
	F	5	3:58 0.3	10:23 1.1	17:09 0.0	23:18 0.9	☾	M	5	5:38 0.4	11:07 0.9	17:26 —0.1	. . . . .	N	Th	5	1:00 1.3	8:07 0.5	12:38 0.8	18:47 —0.1
E	S	6	4:54 0.4	11:04 1.1	17:43 0.0	. . . . .		Tu	6	0:27 1.2	6:59 0.5	11:58 0.8	18:16 —0.1		F	6	2:05 1.3	9:17 0.4	13:52 0.7	20:02 —0.1
☾	S	7	0:10 1.0	6:02 0.4	11:48 1.0	18:20 0.0		W	7	1:27 1.3	8:22 0.5	12:57 0.7	19:10 —0.1		S	7	3:10 1.4	10:14 0.3	15:07 0.8	21:15 —0.1
	M	8	1:02 1.1	7:22 0.4	12:38 0.9	19:02 —0.1		Th	8	2:30 1.4	9:37 0.5	14:02 0.7	20:13 —0.2		S	8	4:07 1.4	11:02 0.3	16:07 0.9	22:22 —0.2
	Tu	9	1:58 1.2	8:44 0.4	13:31 0.8	19:50 —0.1	N	F	9	3:30 1.4	10:40 0.4	15:12 0.7	21:18 —0.2	P	M	9	5:00 1.4	11:45 0.3	17:08 1.0	23:25 —0.2
	W	10	2:55 1.3	9:54 0.4	14:30 0.7	20:42 —0.2		S	10	4:27 1.5	11:33 0.3	16:15 0.7	22:23 —0.2	●	Tu	10	5:50 1.3	12:25 0.1	17:57 1.1	. . . . .
	Th	11	3:51 1.5	10:57 0.4	15:31 0.6	21:36 —0.2		S	11	5:21 1.5	12:20 0.3	17:15 0.8	23:25 —0.2	E	W	11	0:21 —0.2	6:38 1.3	13:00 0.0	18:48 1.2
	F	12	4:45 1.6	11:57 0.4	16:31 0.7	22:32 —0.2	P ●	M	12	6:11 1.5	13:02 0.2	18:11 0.9	. . . . .		Th	12	1:17 —0.1	7:23 1.2	13:35 0.0	19:38 1.3
N	S	13	5:38 1.6	12:45 0.3	17:30 0.7	23:28 —0.2		Tu	13	0:23 —0.2	6:58 1.5	13:42 0.1	19:05 1.0		F	13	2:12 —0.1	8:05 1.1	14:12 —0.1	20:25 1.4
● P	S	14	6:29 1.6	13:33 0.2	18:26 0.8	. . . . .		W	14	1:20 —0.2	7:44 1.4	14:20 0.0	19:58 1.1		S	14	3:08 0.0	8:45 1.0	14:50 —0.1	21:15 1.4
	M	15	0:25 —0.2	7:18 1.6	14:18 0.1	19:22 0.9	E	Th	15	2:17 —0.1	8:30 1.2	14:57 0.0	20:53 1.2		S	15	4:07 0.1	9:26 0.9	15:30 —0.1	22:10 1.4
	Tu	16	1:22 —0.2	8:06 1.5	15:00 0.1	20:18 0.9		F	16	3:15 0.0	9:17 1.2	15:34 0.0	21:47 1.3		M	16	5:09 0.3	10:10 0.8	16:14 —0.1	23:07 1.3
	W	17	2:22 —0.1	8:53 1.4	15:39 0.0	21:15 1.0		S	17	4:18 0.1	10:00 1.0	16:15 —0.1	22:38 1.3		Tu	17	6:17 0.4	10:58 0.7	17:08 —0.0	. . . . .
	Th	18	3:23 0.0	9:40 1.3	16:18 0.0	22:13 1.1		S	18	5:26 0.2	10:43 0.9	16:58 —0.1	23:38 1.3	☽ S	W	18	0:06 1.3	7:27 0.4	11:57 0.6	18:01 0.0
E	F	19	4:27 0.1	10:33 1.1	17:00 0.0	23:12 1.2	☽	M	19	6:37 0.3	11:31 0.8	17:46 —0.1	. . . . .		Th	19	1:08 1.2	8:36 0.3	13:03 0.6	19:10 0.1
	S	20	5:37 0.2	11:20 1.0	17:42 0.0	. . . . .		Tu	20	0:42 1.3	7:53 0.4	12:24 0.7	18:38 0.0		F	20	2:08 1.2	9:33 0.3	14:10 0.6	20: 18 0.1
☽	S	21	0:08 1.2	6:56 0.3	12:08 0.9	18:28 —0.1		W	21	1:47 1.3	9:10 0.5	13:24 0.6	19:37 0.0	A	S	21	3:02 1.2	10:18 0.3	15:15 0.7	21:21 0.1
	M	22	1:12 1.3	8:12 0.3	12:59 0.7	19:17 —0.1	S	Th	22	2:48 1.3	10:18 0.5	14:28 0.6	20:38 0.0		S	22	3:50 1.2	10:55 0.2	16:10 0.8	22:16 0.1
	Tu	23	2:17 1.3	9:30 0.4	13:52 0.6	20:07 —0.1		F	23	3:45 1.3	11:09 0.4	15:31 0.6	21:37 0.0		M	23	4:32 1.1	11:28 0.2	16:55 0.9	23:06 0.1
	W	24	3:17 1.4	10:41 0.4	14:50 0.6	21:00 —0.1		S	24	4:33 1.3	11:50 0.3	16:27 0.6	22:30 0.0		Tu	24	5:06 1.1	11:53 0.1	17:35 1.0	23:29 0.1
	Th	25	4:13 1.4	11:40 0.4	15:48 0.6	21:50 —0.1	A	S	25	5:13 1.3	12:21 0.3	17:15 0.7	23:20 0.0		W	25	5:50 1.1	12:18 0.1	18:12 1.1	. . . . .
S	F	26	5:00 1.4	12:26 0.4	16:40 0.6	22:40 0.0		M	26	5:48 1.3	12:50 0.2	17:57 0.8	. . . . .	E ○	Th	26	0:30 0.1	6:22 1.1	12:42 0.0	18:50 1.1
	S	27	5:42 1.4	13:06 0.4	17:30 0.6	23:27 0.0	○	Tu	27	0:02 0.1	6:20 1.2	13:16 0.1	18:38 0.9		F	27	1:10 0.1	6:55 1.0	13:10 0.0	19:25 1.2
○ A	S	28	6:20 1.4	13:35 0.3	18:15 0.7	. . . . .		W	28	0:40 0.1	6:55 1.2	13:37 0.1	19:16 1.0		S	28	1:50 0.2	7:30 1.0	13:37 —0.1	20:01 1.3
	M	29	0:10 0.0	6:53 1.4	14:05 0.2	19:00 0.7	E	Th	29	1:18 0.1	7:30 1.2	14:00 0.1	19:55 1.0		S	29	2:35 0.2	8:07 0.9	14:08 —0.1	20:47 1.3
	Tu	30	0:50 0.1	7:25 1.3	14:30 0.2	19:41 0.8		F	30	2:57 0.2	8:02 1.1	14:26 0.0	20:36 1.1		M	30	3:25 0.3	8:45 0.9	14:42 —0.1	21:35 1.3
	W	31	1:28 0.1	7:56 1.3	14:52 0.1	20:22 0.9		S	31	2:38 0.2	8:35 1.1	14:52 0.0	21:15 1.2							

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.6 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	1:43 −0.3	7:35 3.1	14:17 −0.4	20:04 3.1
	Tu	2	2:27 −0.3	8:20 3.2	14:58 −0.4	20:50 3.1
	W	3	3:11 −0.3	9:08 3.3	15:39 −0.4	21:34 3.0
	Th	4	3:54 −0.3	9:47 3.3	16:23 −0.3	22:18 2.9
	F	5	4:37 −0.1	10:30 3.2	17:10 −0.2	23:02 2.8
	S	6	5:21 0.0	11:15 3.0	17:55 −0.1	23:48 2.6
	S	7	6:10 0.2	12:02 2.9	18:45 0.1	. . . . .
S	M	8	0:36 2.5	7:00 0.4	12:50 2.7	19:37 0.2
☾ A	Tu	9	1:27 2.4	7:57 0.5	13:42 2.6	20:33 0.3
	W	10	2:22 2.3	8:57 0.5	14:40 2.5	21:29 0.4
	Th	11	3:18 2.3	9:55 0.5	15:37 2.5	22:23 0.3
	F	12	4:10 2.4	10:48 0.4	16:31 2.5	23:12 0.2
	S	13	4:59 2.5	11:36 0.3	17.22 2.6	23:55 0.2
	S	14	5:43 2.7	12:20 0.1	18:10 2.7	. . . . .
E	M	15	0:35 0.1	6:24 2.9	13:02 0.0	18:58 2.8
	Tu	16	1:13 0.0	7:04 3.1	13:43 −0.2	19:35 2.8
●	W	17	1:51 0.0	7:46 3.2	14:27 −0.3	20:17 2.9
	Th	18	2:29 0.0	8:28 3.3	15:10 −0.3	20:58 2.8
	F	19	3:08 0.0	9:12 3.3	15:55 −0.3	21:41 2.8
	S	20	3:49 0.1	9:59 3.3	16:43 −0.2	22:28 2.7
	S	21	4:34 0.2	10:48 3.2	17:35 0.0	23.18 2.6
N P	M	22	5:27 0.3	11:42 3.0	18:32 0.1	. . . . .
	Tu	23	0:15 2.4	6:32 0.4	12:42 2.8	19:34 0.2
☽	W	24	1:20 2.4	7:46 0.4	13:47 2.7	20:40 0.3
	Th	25	2:30 2.4	9:02 0.4	14:57 2.6	21:46 0.2
	F	26	3:36 2.5	10:12 0.2	16:05 2.6	22:47 0.1
	S	27	4:37 2.7	11:15 0.1	17:10 2.7	23:40 0.0
E	S	28	5:30 2.9	12:10 −0.1	18:07 2.8	. . . . .
	M	29	0:29 −0.1	6:20 3.0	13:00 −0.2	18:57 2.8
	Tu	30	1:15 −0.2	7:06 3.2	13:47 −0.3	19:43 2.9

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:58 −0.2	7:50 3.2	14:30 −0.4	20:26 2.9
	Th	2	2:41 −0.2	8:33 3.3	15:15 −0.3	21:08 2.8
	F	3	3:25 −0.1	9:17 3.2	15:58 −0.3	21:53 2.7
	S	4	4:08 0.0	10:00 3.1	16:41 −0.2	22:35 2.7
S	S	5	4:52 0.2	10:45 3.0	17:26 −0.1	23:20 2.6
	M	6	5:38 0.3	11:30 2.8	18:13 0.1	. . . . .
A	Tu	7	0:05 2.5	6:28 0.4	12:16 2.7	19:01 0.2
	W	8	0:53 2.4	7:21 0.5	13:07 2.6	19:52 0.3
☾	Th	9	1:43 2.4	8:17 0.5	14:00 2.5	20:42 0.3
	F	10	2:36 2.5	9:12 0.5	14:55 2.5	21:33 0.3
	S	11	3:26 2.6	10:05 0.4	15:50 2.5	22:20 0.3
E	S	12	4:13 2.7	10:55 0.2	16:42 2.5	23:06 0.2
	M	13	4:58 2.9	11:42 0.1	17:30 2.6	23:50 0.2
	Tu	14	5:44 3.0	12:29 −0.1	18:17 2.7	. . . . .
	W	15	0:32 0.1	6:30 3.2	13:15 −0.2	19:02 2.7
●	Th	16	1:15 0.1	7:17 3.3	14:03 −0.3	19:48 2.7
	F	17	1:58 0.1	8:05 3.4	14:50 −0.3	20:35 2.7
	S	18	2:43 0.1	8:53 3.4	15:39 −0.3	21:25 2.7
N P	S	19	3:33 0.1	9:43 3.3	16:30 −0.2	22:17 2.6
	M	20	4:28 0.2	10:36 3.2	17:23 −0.1	23:12 2.6
	Tu	21	5:27 0.3	11:32 3.0	18:20 0.0	. . . . .
	W	22	0:12 2.5	6:34 0.3	12:32 2.8	19:20 0.1
☽	Th	23	1:13 2.5	7:42 0.3	13:35 2.7	20:20 0.1
	F	24	2:15 2.6	8:51 0.2	14:43 2.6	21:20 0.1
E	S	25	3:14 2.7	9:58 0.1	15:50 2.6	22:17 0.1
	S	26	4:10 2.8	10:56 0.0	16:50 2.6	23:10 0.0
	M	27	5:03 2.9	11:50 −0.1	17:44 2.6	. . . . .
	Tu	28	0:00 −0.1	5:53 3.0	12:40 −0.1	18.32 2.6
	W	29	0:47 −0.1	6:39 3.1	13:25 −0.2	19:19 2.6
○	Th	30	1:32 −0.1	7:25 3.2	14:10 −0.2	20:02 2.6
	F	31	2:17 0.0	8:07 3.1	14:52 −0.2	20.45 2.6

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	3:00 0.0	8:50 3.1	15:34 −0.2	21:27 2.6
	S	2	3:43 0.1	9:32 3.0	16:17 −0.1	22:10 2.6
	M	3	4:26 0.2	10:16 2.9	16:58 0.0	22:53 2.6
A	Tu	4	5:10 0.3	11:00 2.8	17:42 0.0	23:35 2.6
	W	5	5:56 0.4	11:45 2.7	18:26 0.1	. . . . .
	Th	6	0:20 2.6	6:45 0.4	12:32 2.6	19:10 0.2
☾	F	7	1:05 2.6	7:35 0.4	13:20 2.6	19:55 0.3
	S	8	1:52 2.7	8:27 0.4	14:11 2.5	20:42 0.3
E	S	9	2:38 2.8	9:20 0.3	15:02 2.5	21:28 0.3
	M	10	3:28 2.9	10:13 0.2	15:55 2.5	22:15 0.3
	Tu	11	4:18 3.0	11:06 0.1	16:48 2.5	23:03 0.3
	W	12	5:08 3.1	11:58 0.0	17:40 2.5	23:53 0.2
	Th	13	6:00 3.2	12:30 −0.1	18:33 2.6	. . . . .
	F	14	0:53 0.2	6:52 3.3	13:41 −0.2	19:27 2.6
● N	S	15	1:36 0.1	7:44 3.4	14:33 −0.3	20:18 2.6
P	S	16	2:30 0.1	8:38 3.3	15:25 −0.3	21:12 2.7
	M	17	3:26 0.1	9:31 3.3	16:16 −0.3	22:07 2.7
	Tu	18	4:23 0.1	10:26 3.2	17:10 −0.2	23:04 2.7
	W	19	5:28 0.1	11:25 3.0	18:02 −0.1	. . . . .
	Th	20	0:00 2.8	6:25 0.1	12:18 2.9	18:58 −0.1
☽ E	F	21	0:55 2.8	7:28 0.1	13:20 2.8	19:55 0.0
	S	22	1:52 2.8	8:30 0.1	14:22 2.6	20:50 0.0
	S	23	2:45 2.9	9:32 0.1	15:23 2.5	21:45 0.0
	M	24	3:45 2.9	10:31 0.1	16:30 2.5	22:38 0.1
	Tu	25	4:35 2.9	11:26 0.1	17:16 2.4	23:31 0.1
	W	26	5:27 2.9	12:17 0.0	18:08 2.4	. . . . .
	Th	27	0:21 0.1	6:15 3.0	13:06 0.0	18:57 2.4
S	F	28	1:09 0.1	7:00 3.0	13:50 −0.1	19:42 2.5
○	S	29	1:55 0.1	7:45 3.0	14:31 −0.1	20:23 2.5
	S	30	2:38 0.1	8:27 3.0	15:12 −0.1	21:05 2.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	4:35 2.4	10:52 0.3	17:05 3.2	23:58 0.0
	Tu	2	5:36 2.4	11:52 0.2	18:08 3.2	. . . . .
N	W	3	0:55 −0.1	6:38 2.5	12:52 0.1	19:00 3.3
○ P	Th	4	1:50 −0.2	7:37 2.6	13:50 0.1	19:51 3.3
	F	5	2:44 −0.3	8:33 2.7	14:48 0.0	20:50 3.3
	S	6	3:36 −0.3	9:27 2.8	15:46 −0.1	21:46 3.3
	S	7	4:27 −0.3	10:20 2.9	16:43 −0.1	22:40 3.2
	M	8	5:18 −0.3	11:12 2.9	17:39 −0.1	23:34 3.1
E	Tu	9	6:09 −0.2	12:05 2.9	18:37 −0.1	. . . . .
	W	10	0:28 2.9	7:00 −0.2	12:57 2.9	19:35 0.0
☾	Th	11	1:22 2.7	7:58 −0.1	13:50 2.9	20:33 0.1
	F	12	2:20 2.6	8:46 0.0	14:44 2.9	21:30 0.1
	S	13	3:17 2.4	9:40 0.1	15:37 2.9	22:27 0.2
	S	14	4:16 2.3	10:34 0.2	16:28 2.8	23:22 0.2
	M	15	5:11 2.3	11:26 0.2	17:19 2.8	. . . . .
	Tu	16	0:10 0.1	6:02 2.3	12:26 0.2	18:05 2.8
S A	W	17	0:57 0.1	6:48 2.3	13:08 0.2	18:50 2.9
	Th	18	1:40 0.0	7:29 2.4	13:47 0.2	19:33 2.9
●	F	19	2:20 0.0	8:08 2.5	14:27 0.2	20:15 2.9
	S	20	2:58 0.0	8:46 2.6	15:05 0.2	20:58 2.9
	S	21	3:35 −0.1	9:22 2.7	15:45 0.2	21:34 2.9
	M	22	4:12 −0.1	10:01 2.8	16:23 0.2	22:15 2.9
	Tu	23	4:47 0.0	10:40 2.9	17:01 0.2	22:55 2.9
E	W	24	5:23 0.0	11:21 3.0	17:45 0.2	23:37 2.8
	Th	25	6:00 0.1	12:05 3.0	18:34 0.2	. . . . .
	F	26	0:20 2.7	6:39 0.2	12:52 3.0	19:27 0.2
☽	S	27	1:07 2.6	7:22 0.3	13:42 3.0	20:25 0.2
	S	28	2:00 2.5	8:14 0.3	14:40 3.0	21:30 0.2
	M	29	2:59 2.4	9:18 0.4	15:40 3.0	22:36 0.2
	Tu	30	4:07 2.3	10:28 0.4	16:43 3.0	23:40 0.1
N	W	31	5:17 2.3	11:38 0.2	17:46 3.1	. . . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	0:40 0.0	6:24 2.5	12:42 0.2	18:47 3.2
○	F	2	1:36 −0.2	7:28 2.6	13:43 −0.1	19:45 3.3
	S	3	2:28 −0.3	8:20 2.8	14:39 −0.2	20:38 3.3
	S	4	3:18 −0.4	9:10 3.0	15:33 −0.3	21:32 3.2
	M	5	4:06 −0.4	10:00 3.1	16:25 −0.3	22:22 3.2
E	Tu	6	4:52 −0.4	10:48 3.1	17:18 −0.2	23:10 3.1
	W	7	5:40 −0.3	11:35 3.1	18:00 −0.2	. . . . .
	Th	8	0:00 2.9	6:27 −0.2	12:24 3.1	19:02 0.0
☾	F	9	0:51 2.7	7:17 0.0	13:14 3.0	19:57 0.1
	S	10	1:42 2.5	8:08 0.1	14:07 2.9	20:54 0.2
	S	11	2:37 2.3	9:04 0.2	15:00 2.8	21:52 0.3
	M	12	3:35 2.3	10:01 0.3	15:55 2.7	22:50 0.3
S	Tu	13	4:33 2.2	10:58 0.3	16:47 2.7	23:42 0.3
A	W	14	5:29 2.2	11:51 0.4	17:38 2.7	. . . . .
	Th	15	0:29 0.2	6:17 2.3	12:40 0.3	18:25 2.7
	F	16	1:12 0.1	6:58 2.4	13:22 0.2	19:08 2.8
	S	17	1:52 0.0	7:38 2.6	14:08 0.1	19:50 2.9
●	S	18	2:28 0.0	8:15 2.7	14:40 0.1	20:30 2.9
	M	19	3:04 −0.1	8:51 2.9	15:19 0.0	21:10 3.0
E	Tu	20	3:39 −0.1	9:30 3.0	15:56 0.0	21:50 3.0
	W	21	4:12 0.0	10:08 3.1	16:36 0.0	22:30 2.9
	Th	22	4:47 0.0	10:49 3.2	17:20 0.0	23:08 2.8
	F	23	5:22 0.1	11:33 3.2	18:07 0.0	23:50 2.7
	S	24	6:01 0.2	12:21 3.1	18:59 0.1	. . . . .
☽	S	25	0:37 2.5	6:48 0.3	13:13 3.0	20:00 0.2
	M	26	1:31 2.4	7:45 0.4	14:13 2.9	21:08 0.3
N	Tu	27	2:37 2.3	9:00 0.5	15:20 2.9	22:20 0.3
	W	28	3:52 2.3	10:20 0.4	16:29 2.9	23:25 0.2
	Th	29	5:07 2.4	11:33 0.2	17:35 2.9	. . . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:25 0.0	6:10 2.5	12:36 0.0	18:35 3.1
	S	2	1:20 −0.1	7:08 2.8	13:34 −0.2	19:30 3.2
○	S	3	1:58 −0.3	7:58 3.0	14:27 −0.3	20:23 3.2
E	M	4	2:54 −0.4	8:47 3.2	15:15 −0.4	21:11 3.2
	Tu	5	3:38 −0.4	9:32 3.2	16:03 −0.4	21:58 3.2
	W	6	4:23 −0.4	10:20 3.3	16:52 −0.3	22:45 3.0
	Th	7	5:07 −0.3	11:08 3.2	17:38 −0.2	23:00 2.9
	F	8	5:58 −0.1	11:50 3.1	18:28 −0.1	. . . . .
	S	9	0:16 2.7	6:42 0.1	12:37 2.9	19:20 0.1
☾	S	10	1:05 2.5	7:34 0.3	13:28 2.8	20:16 0.3
S	M	11	1:58 2.3	8:30 0.4	14:21 2.7	21:15 0.4
A	Tu	12	2:57 2.2	9:30 0.5	15:18 2.6	22:12 0.4
	W	13	3:54 2.2	10:29 0.4	16:04 2.5	22:07 0.3
	Th	14	4:50 2.3	11:22 0.4	17:07 2.6	23:55 0.3
	F	15	5:38 2.4	12:11 0.3	17:55 2.7	. . . . .
	S	16	0:38 0.2	6:22 2.6	12:54 0.2	18:40 2.8
	S	17	1:16 0.1	7:01 2.7	13:34 0.0	19:22 2.9
●	M	18	1:58 0.0	7:41 2.8	14:13 −0.1	20:03 2.9
E	Tu	19	2:28 0.0	8:18 3.1	14:52 −0.1	20:42 3.0
	W	20	3:08 0.0	8:57 3.2	15:31 −0.2	21:21 2.9
	Th	21	3:37 0.0	9:38 3.2	16:14 −0.2	21:02 2.9
	F	22	4:13 0.1	9:20 3.2	16:58 −0.1	22:43 2.8
	S	23	4:50 0.2	11:06 3.2	17:47 0.0	23:28 2.6
	S	24	5:35 0.3	11:56 3.1	18:42 0.1	. . . . .
N ☽	M	25	0:19 2.6	6:28 0.4	12:52 2.9	19:45 0.3
	Tu	26	1:18 2.3	7:40 0.5	13:55 2.8	20:55 0.3
	W	27	2:30 2.3	9:02 0.5	15:07 2.7	22:05 0.3
P	Th	28	3:46 2.3	10:20 0.3	16:18 2.7	23:10 0.2
	F	29	4:55 2.5	11:28 0.1	17:23 2.8	. . . . .
	S	30	0:06 0.0	5:54 2.7	12:25 −0.1	18:23 2.9
	S	31	0:56 −0.1	6:45 2.9	13:20 −0.3	19:15 3.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	1:43	7:35	14:17	20:04
			−0.3	3.1	−0.4	3.1
	Tu	2	2:27	8:20	14:58	20:50
			−0.3	3.2	−0.4	3.1
	W	3	3:11	9:08	15:39	21:34
			−0.3	3.3	−0.4	3.0
	Th	4	3:54	9:47	16:23	22:18
			−0.3	3.3	−0.3	2.9
	F	5	4:37	10:30	17:10	23:02
			−0.1	3.2	−0.2	2.8
	S	6	5:21	11:15	17:55	23:48
			0.0	3.0	−0.1	2.6
	S	7	6:10	12:02	18:45	. . .
			0.2	2.9	0.1	. . .
S	M	8	0:36	7:00	12:50	19:37
			2.5	0.4	2.7	0.2
☾ A	Tu	9	1:27	7:57	13:42	20:33
			2.4	0.5	2.6	0.3
	W	10	2:22	8:57	14:40	21:29
			2.3	0.5	2.5	0.4
	Th	11	3:18	9:55	15:37	22:28
			2.3	0.5	2.5	0.3
	F	12	4:10	10:48	16:31	23:12
			2.4	0.4	2.5	0.2
	S	13	4:59	11:36	17:22	23:55
			2.5	0.3	2.6	0.2
	S	14	5:43	12:20	18:10	. . .
			2.7	0.1	2.7	. . .
E	M	15	0:35	6:24	13:02	18:53
			0.1	2.9	0.0	2.8
	Tu	16	1:13	7:04	13:43	19:35
			0.0	3.1	−0.2	2.8
●	W	17	1:51	7:46	14:27	20:17
			0.0	3.2	−0.3	2.9
	Th	18	2:29	8:28	15:10	20:58
			0.0	3.3	−0.3	2.8
	F	19	3:08	9:12	15:55	21:41
			0.0	3.3	−0.3	2.8
	S	20	3:49	9:59	16:43	22:28
			0.1	3.3	−0.2	2.7
	S	21	4:34	10:48	17:35	23:18
			0.2	3.2	0.0	2.6
N P	M	22	5:27	11:42	18:32	. . .
			0.3	3.0	0.1	. . .
	Tu	23	0:15	6:32	12:42	19:34
			2.4	0.4	2.8	0.2
☽	W	24	1:20	7:46	13:47	20:40
			2.4	0.4	2.7	0.3
	Th	25	2:30	9:02	14:57	21:46
			2.4	0.4	2.6	0.2
	F	26	3:36	10:12	16:05	22:47
			2.5	0.2	2.6	0.1
	S	27	4:37	11:15	17:10	23:40
			2.7	0.1	2.7	0.0
E	S	28	5:30	12:10	18:07	. . .
			2.9	−0.1	2.8	. . .
	M	29	0:29	6:20	13:00	18:57
			−0.1	3.0	−0.2	2.8
	Tu	30	1:15	7:06	13:47	19:43
			−0.2	3.2	−0.3	2.9
MAY.						
○	W	1	1:58	7:50	14:30	20:26
			−0.2	3.2	−0.4	2.9
	Th	2	2:41	8:33	15:15	21:08
			−0.2	3.3	−0.3	2.8
	F	3	3:25	9:17	15:58	21:53
			−0.1	3.2	−0.3	2.7
	S	4	4:08	10:00	16:41	22:35
			0.0	3.1	−0.2	2.7
S	S	5	4:52	10:45	17:26	23:20
			0.2	3.0	−0.1	2.6
	M	6	5:38	11:30	18:13	. . .
			0.3	2.8	0.1	. . .
A	Tu	7	0:05	6:28	12:16	19:01
			2.5	0.4	2.7	0.2
	W	8	0:53	7:21	13:07	19:52
			2.4	0.5	2.6	0.3
☾	Th	9	1:43	8:17	14:00	20:42
			2.4	0.5	2.5	0.3
	F	10	2:36	9:12	14:55	21:33
			2.5	0.5	2.5	0.3
	S	11	3:26	10:05	15:50	22:20
			2.6	0.4	2.5	0.3
E	S	12	4:13	10:55	16:42	23:06
			2.7	0.2	2.5	0.2
	M	13	4:58	11:42	17:30	23:50
			2.9	0.1	2.6	0.2
	Tu	14	5:44	12:29	18:17	. . .
			3.0	−0.1	2.7	. . .
	W	15	0:32	6:30	13:15	19:02
			0.1	3.2	−0.2	2.7
●	Th	16	1:15	7:17	14:03	19:48
			0.1	3.3	−0.3	2.7
	F	17	1:58	8:05	14:50	20:35
			0.1	3.4	−0.3	2.7
	S	18	2:43	8:58	15:39	21:25
			0.1	3.4	−0.3	2.7
N P	S	19	3:33	9:43	16:30	22:17
			0.1	3.3	−0.2	2.6
	M	20	4:28	10:36	17:23	23:12
			0.2	3.2	−0.1	2.6
	Tu	21	5:27	11:32	18:20	. . .
			0.3	3.0	0.0	. . .
	W	22	0:12	6:34	12:32	19:20
			2.5	0.3	2.8	0.1
☽	Th	23	1:13	7:42	13:35	20:20
			2.5	0.3	2.7	0.1
	F	24	2:15	8:51	14:43	21:20
			2.6	0.2	2.6	0.1
E	S	25	3:14	9:58	15:50	22:17
			2.7	0.1	2.6	0.1
	S	26	4:10	10:56	16:50	23:10
			2.8	0.0	2.6	0.0
	M	27	5:03	11:50	17:44	. . .
			2.9	−0.1	2.6	. . .
	Tu	28	0:00	5:53	12:40	18:32
			−0.1	3.0	−0.1	2.6
	W	29	0:47	6:39	13:25	19:19
			−0.1	3.1	−0.2	2.6
○	Th	30	1:32	7:25	14:10	20:02
			−0.1	3.2	−0.2	2.6
	F	31	2:17	8:07	14:52	20:45
			0.0	3.1	−0.2	2.6
JUNE.						
S	S	1	3:00	8:50	15:34	21:27
			0.0	3.1	−0.2	2.6
	S	2	3:43	9:32	16:17	22:10
			0.1	3.0	−0.1	2.6
	M	3	4:26	10:16	16:58	22:53
			0.2	2.9	0.0	2.6
A	Tu	4	5:10	11:00	17:42	23:35
			0.3	2.8	0.0	2.6
	W	5	5:56	11:45	18:26	. . .
			0.4	2.7	0.1	. . .
	Th	6	0:20	6:45	12:32	19:10
			2.6	0.4	2.6	0.2
☾	F	7	1:05	7:35	13:20	19:55
			2.6	0.4	2.6	0.3
	S	8	1:52	8:27	14:11	20:42
			2.7	0.4	2.5	0.3
E	S	9	2:38	9:20	15:02	21:28
			2.8	0.3	2.5	0.3
	M	10	3:28	10:13	15:55	22:15
			2.9	0.2	2.5	0.3
	Tu	11	4:18	11:06	16:48	23:03
			3.0	0.1	2.5	0.3
	W	12	5:08	11:58	17:40	23:53
			3.1	0.0	2.5	0.2
	Th	13	6:00	12:30	18:33	. . .
			3.2	−0.1	2.6	. . .
	F	14	0:53	6:52	13:41	19:27
			0.2	3.3	−0.2	2.6
● N	S	15	1:36	7:44	14:33	20:18
			0.1	3.4	−0.3	2.6
P	S	16	2:30	8:38	15:25	21:12
			0.1	3.3	−0.3	2.7
	M	17	3:26	9:31	16:16	22:07
			0.1	3.3	−0.3	2.7
	Tu	18	4:23	10:26	17:10	23:04
			0.1	3.2	−0.2	2.7
	W	19	5:23	11:25	18:02	. . .
			0.1	3.0	−0.1	. . .
	Th	20	0:00	6:25	12:18	18:58
			2.8	0.1	2.9	−0.1
☽ E	F	21	0:55	7:28	13:20	19:55
			2.8	0.1	2.8	0.0
	S	22	1:52	8:30	14:22	20:50
			2.8	0.1	2.6	0.0
	S	23	2:45	9:32	15:23	21:45
			2.9	0.1	2.5	0.0
	M	24	3:45	10:31	16:30	22:38
			2.9	0.1	2.5	0.1
	Tu	25	4:35	11:26	17:16	23:31
			2.9	0.1	2.4	0.1
	W	26	5:27	12:17	18:08	. . .
			2.9	0.0	2.4	. . .
	Th	27	0:21	6:15	13:06	18:57
			0.1	3.0	0.0	2.4
S	F	28	1:09	7:00	13:50	19:42
			0.1	3.0	−0.1	2.5
○	S	29	1:55	7:45	14:31	20:23
			0.1	3.0	−0.1	2.5
	S	30	2:38	8:27	15:12	21:05
			0.1	3.0	−0.1	2.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	3:20 0.2	9:10 3.0	15:52 −0.1	21:44 2.6
	Tu	2	4:01 0.2	9:51 2.9	16:31 0.0	22:28 2.7
	W	3	4:42 0.3	10:32 2.9	17:09 0.0	23:02 2.7
	Th	4	5:23 0.3	11:14 2.8	17:48 0.1	23:42 2.8
	F	5	6:05 0.3	11:57 2.7	18:27 0.1	. . . . .
E	S	6	0:25 2.9	6:52 0.3	12:40 2.6	19:07 0.2
☾	S	7	1:10 2.9	7:41 0.3	13:26 2.6	19:48 0.3
	M	8	1:56 2.9	8:36 0.3	14:15 2.5	20:33 0.4
	Tu	9	2:47 3.0	9:32 0.2	15:10 2.4	21:25 0.4
	W	10	3:42 3.0	10:32 0.2	16:07 2.4	22:22 0.4
	Th	11	4:38 3.1	11:30 0.2	17:07 2.4	23:22 0.3
	F	12	5:35 3.2	12:28 0.0	18:08 2.5	. . . . .
N	S	13	0:34 0.2	6:33 3.2	13:24 −0.1	19:08 2.5
● P	S	14	1:24 0.1	7:28 3.3	14:17 −0.2	20:05 2.7
	M	15	2:21 0.0	8:25 3.3	15:08 −0.3	21:00 2.8
	Tu	16	3:18 −0.1	9:18 3.3	16:00 −0.3	21:55 2.9
	W	17	4:15 −0.1	10:13 3.2	16:50 −0.3	22:47 3.0
	Th	18	5:10 −0.1	11:07 3.1	17:40 −0.3	23:38 3.0
E	F	19	6:07 −0.1	12:00 3.0	18:30 −0.2	. . . . .
	S	20	0:30 3.0	7:05 0.0	12:56 2.9	19:23 −0.1
☽	S	21	1:22 3.0	8:03 0.1	13:52 2.6	20:17 0.0
	M	22	2:15 2.9	9:03 0.1	14:50 2.5	21:10 0.1
	Tu	23	3:10 2.9	10:01 0.2	15:49 2.3	22:08 0.2
	W	24	4:05 2.8	10:59 0.2	16:47 2.3	23:04 0.2
	Th	25	4:59 2.8	11:58 0.2	17:44 2.3	23:58 0.2
S	F	26	5:50 2.8	12:42 0.1	18:34 2.3	. . . . .
	S	27	0:48 0.2	6:38 2.8	13:28 0.1	19:19 2.4
○ A	S	28	1:34 0.2	7:22 2.9	14:18 0.0	20:00 2.5
	M	29	2:17 0.1	8:05 2.9	14:47 0.0	20:37 2.6
	T	30	2:57 0.1	8:47 2.9	15:23 −0.1	21:13 2.7
	W	31	3:35 0.1	9:25 2.9	15:59 −0.1	21:50 2.8

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:12 0.1	10:05 2.9	16:33 0.0	22:28 2.9
E	F	2	4:50 0.1	10:43 2.9	17:06 0.0	23:05 3.0
	S	3	5:20 0.1	11:22 2.8	17:44 0.1	23:46 3.0
	S	4	6:15 0.1	12:02 2.7	18:20 0.2	. . . . .
☾	M	5	0:30 3.0	7:05 0.2	12:47 2.6	19:00 0.3
	Tu	6	1:18 3.0	7:58 0.2	13:35 2.5	19:46 0.4
	W	7	2:12 3.0	9:00 0.3	14:30 2.4	20:45 0.4
	Th	8	3:11 3.0	10:04 0.3	15:36 2.3	21:55 0.4
N	F	9	4:18 3.0	11:08 0.2	16:45 2.3	23:05 0.3
	S	10	5:15 3.0	12:11 0.1	17:53 2.4	. . . . .
	S	11	0:13 0.2	6:17 3.1	13:07 −0.1	18:55 2.6
P ●	M	12	1:15 0.0	7:15 3.2	14:00 −0.2	19:50 2.8
	Tu	13	2:12 −0.2	8:10 3.2	14:50 −0.3	20:45 3.0
	W	14	3:07 −0.3	9:03 3.3	15:38 −0.4	21:34 3.1
E	Th	15	3:59 −0.3	9:56 3.3	16:25 −0.4	22:22 3.2
	F	16	4:50 −0.3	10:47 3.1	17:12 −0.3	23:10 3.2
	S	17	5:42 −0.2	11:37 3.0	18:00 −0.2	23:59 3.1
	S	18	6:35 −0.1	12:27 2.8	18:50 −0.1	. . . . .
☽	M	19	0:49 3.0	7:32 0.0	13:20 2.6	19:48 0.1
	Tu	20	1:42 2.9	8:30 0.2	14:16 2.4	20:40 0.2
	W	21	2:38 2.8	9:31 0.3	15:17 2.3	21:40 0.3
S	Th	22	3:35 2.7	10:30 0.3	16:18 2.2	22:40 0.3
	F	23	4:32 2.6	11:26 0.3	17:17 2.3	23:35 0.3
	S	24	5:25 2.6	12:16 0.2	18:07 2.3	. . . . .
A	S	25	0:26 0.2	6:15 2.7	13:00 0.1	18:50 2.4
	M	26	1:11 0.2	7:00 2.8	13:40 0.1	19:30 2.6
○	Tu	27	1:52 0.1	7:40 2.8	14:17 0.0	20:05 2.7
	W	28	2:30 0.0	8:20 2.9	14:50 0.0	20:40 2.9
E	Th	29	3:05 0.0	9:00 2.9	15:24 0.0	21:15 3.0
	F	30	3:43 0.0	9:35 2.9	15:57 0.0	21:52 3.1
	S	31	4:20 0.0	10:12 2.9	16:28 0.1	22:29 3.1

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	5:00 0.0	10:50 2.8	17:02 0.1	23:10 3.1
	M	2	5:44 0.0	11:30 2.7	17:38 0.2	23:55 3.1
	Tu	3	6:38 0.1	12:14 2.6	18:20 0.3	. . . . .
☾	W	4	0:45 3.0	7:30 0.2	13:06 2.4	19:13 0.5
N	Th	5	1:42 2.9	8:34 0.3	14:06 2.3	20:28 0.5
	F	6	2:47 2.8	9:42 0.3	15:19 2.3	21:45 0.5
	S	7	3:54 2.8	10:50 0.3	16:33 2.3	23:00 0.3
	S	8	5:01 2.9	11:52 0.1	17:41 2.5	. . . . .
P	M	9	0:07 0.1	6:08 3.0	12:38 0.0	18:41 2.7
●	Tu	10	1:05 −0.1	7:00 3.1	13:39 −0.2	19:32 3.0
E	W	11	1:59 −0.3	7:55 3.2	14:27 −0.3	20:20 3.2
	Th	12	2:50 −0.4	8:47 3.2	15:12 −0.4	21:07 3.3
	F	13	3:38 −0.4	9:35 3.2	15:57 −0.4	21:53 3.3
	S	14	4:26 −0.4	10:22 3.1	16:42 −0.3	22:40 3.3
	S	15	5:15 −0.3	11:08 2.9	17:28 −0.2	23:27 3.2
	M	16	6:05 −0.1	11:57 2.7	18:18 0.0	. . . . .
	Tu	17	0:16 3.0	6:59 0.0	12:48 2.5	19:11 0.2
☽ S	W	18	1:08 2.8	7:55 0.2	13:45 2.4	20:10 0.3
	Th	19	2:03 2.7	8:55 0.3	14:43 2.3	21:12 0.4
	F	20	3:01 2.6	9:55 0.4	15:45 2.2	22:12 0.4
A	S	21	4:00 2.5	10:50 0.3	16:41 2.3	23:09 0.3
	S	22	4:56 2.5	11:41 0.3	17:30 2.4	23:58 0.3
	M	23	5:47 2.6	12:24 0.2	18:12 2.6	. . . . .
	Tu	24	0:42 0.1	6:31 2.7	13:03 0.1	18:50 2.7
	W	25	1:22 0.0	7:12 2.8	13:38 0.0	19:27 2.9
E ○	Th	26	1:59 −0.1	7:51 2.9	14:11 0.0	20:02 3.0
	F	27	2:33 −0.1	8:28 2.9	14:45 0.0	20:38 3.1
	S	28	3:13 −0.2	9:05 2.9	15:18 0.1	21:12 3.2
	S	29	3:53 −0.2	9:43 2.8	15:52 0.1	21:57 3.2
	M	30	4:35 −0.1	10:23 2.8	16:27 0.2	22:40 3.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	5:20	11:01	17:04	23:27
			0.0	2.7	0.4	3.1
	W	2	6:10	11:50	17:53	. . .
			0.1	2.5	0.4	. . .
N	Th	3	0:20	7:08	12:45	18:55
☾			3.0	0.2	2.4	0.5
	F	4	1:19	8:15	13:51	20:17
			2.8	0.3	2.3	0.5
	S	5	2:27	9:25	15:05	21:40
			2.7	0.3	2.3	0.4
	S	6	3:38	10:32	16:16	22:52
			2.7	0.3	2.5	0.3
P	M	7	4:47	11:31	17:18	23:55
			2.7	0.1	2.7	0.0
	Tu	8	5:50	12:25	18:14	. . .
			2.8	0.0	2.9	. . .
E	W	9	0:50	6:45	13:13	19:05
			−0.2	2.9	−0.2	3.1
●	Th	10	1:41	7:35	13:58	19:52
			−0.3	3.0	−0.3	3.3
	F	11	2:29	8:23	14:43	20:38
			−0.4	3.0	−0.3	3.3
	S	12	3:16	9:10	15:27	21:24
			−0.4	3.0	−0.3	3.3
	S	13	4:02	9:58	16:12	22:10
			−0.4	2.9	−0.2	3.3
	M	14	4:50	10:40	17:00	22:57
			−0.3	2.8	0.0	3.1
	Tu	15	5:38	11:27	17:48	23:44
			−0.1	2.6	0.2	2.9
S	W	16	6:28	12:17	18:42	. . .
			0.1	2.5	0.3	. . .
☽	Th	17	0:35	7:22	13:10	19:40
			2.8	0.2	2.4	0.4
	F	18	1:28	8:18	14:05	20:40
			2.6	0.3	2.3	0.5
A	S	19	2:24	9:15	15:00	21:40
			2.5	0.3	2.3	0.4
	S	20	3:22	10:07	15:53	22:33
			2.5	0.3	2.4	0.4
	M	21	4:16	10:56	16:40	23:22
			2.5	0.3	2.5	0.3
	Tu	22	5:05	11:40	17:24	. . .
			2.5	0.2	2.7	. . .
E	W	23	0:05	5:52	12:18	18:04
			0.1	2.6	0.2	2.9
	Th	24	0:46	6:34	12:56	18:43
			0.0	2.7	0.1	3.0
○	F	25	1:28	7:13	13:30	19:22
			−0.1	2.7	0.1	3.1
	S	26	2:05	7:53	14:05	20:03
			−0.2	2.8	0.1	3.3
	S	27	2:47	8:32	14:41	20:45
			−0.3	2.8	0.1	3.3
	M	28	3:30	9:15	15:18	21:31
			−0.2	2.7	0.2	3.3
	Tu	29	4:15	10:00	16:00	22:18
			−0.2	2.7	0.3	3.2
N	W	30	5:03	10:47	16:50	23:10
			−0.1	2.6	0.3	3.0
	Th	31	5:58	11:40	17:50	. . .
			0.1	2.5	0.4	. . .

NOVEMBER.

Moon	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	0:06	6:57	12:40	19:02
			2.9	0.2	2.4	0.5
	S	2	1:07	8:01	13:48	20:20
			2.7	0.3	2.4	0.5
P	S	3	2:15	9:05	14:55	21:35
			2.6	0.3	2.5	0.3
	M	4	3:25	10:07	15:58	22:41
			2.6	0.2	2.6	0.2
E	Tu	5	4:30	11:05	16:57	23:40
			2.6	0.1	2.8	0.0
	W	6	5:30	11:57	17:50	. . .
			2.7	0.0	3.0	. . .
	Th	7	0:33	6:25	12:45	18:40
			−0.1	2.7	−0.1	3.2
●	F	8	1:28	7:15	13:32	19:26
			−0.2	2.8	−0.2	3.3
	S	9	2:10	8:02	14:17	20:12
			−0.3	2.8	−0.2	3.3
	S	10	2:55	8:47	15:01	20:58
			−0.3	2.8	−0.1	3.3
	M	11	3:40	9:31	15:47	21:44
			−0.3	2.7	0.0	3.2
S	Tu	12	4:25	10:16	16:34	22:28
			−0.2	2.7	0.1	3.0
	W	13	5:11	11:02	17:22	23:14
			−0.1	2.6	0.2	2.9
	Th	14	6:00	11:59	18:14	. . .
			0.0	2.5	0.3	. . .
	F	15	0:08	6:48	12:38	19:08
			2.7	0.2	2.5	0.4
A	S	16	0:52	7:38	13:27	20:03
☽			2.6	0.2	2.5	0.5
	S	17	1:44	8:28	14:16	20:58
			2.5	0.3	2.5	0.4
	M	18	2:38	9:17	15:05	21:50
			2.5	0.3	2.6	0.4
E	Tu	19	3:30	10:03	15:52	22:38
			2.5	0.3	2.7	0.3
	W	20	4:20	10:46	16:36	23:25
			2.5	0.3	2.8	0.2
	Th	21	5:07	11:29	17:20	. . .
			2.5	0.3	3.0	. . .
	F	22	0:10	5:52	12:10	18:06
			0.0	2.6	0.2	3.1
	S	23	0:54	6:38	12:49	18:51
			−0.1	2.6	0.2	3.2
○	S	24	1:40	7:23	13:31	19:38
			−0.2	2.6	0.2	3.3
	M	25	2:26	8:10	14:14	20:26
			−0.2	2.7	0.2	3.3
N	Tu	26	3:13	8:56	15:01	21:14
			−0.2	2.7	0.2	3.3
	W	27	4:03	9:46	15:52	22:06
			−0.2	2.6	0.3	3.2
P	Th	28	4:54	10:40	16:51	23:00
			−0.1	2.6	0.3	3.0
	F	29	5:48	11:35	17:54	23:55
			0.0	2.6	0.3	2.9
	S	30	6:44	12:34	19:03	. . .
			0.1	2.6	0.3	. . .

DECEMBER.

Moon	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:56	7:42	13:45	20:14
			2.7	0.1	2.6	0.3
E	M	2	2:00	8:42	14:36	21:20
			2.6	0.1	2.7	0.2
	Tu	3	3:05	9:40	15:35	22:24
			2.5	0.1	2.8	0.2
	W	4	4:10	10:35	16:32	23:21
			2.5	0.1	2.9	0.0
	Th	5	5:10	11:28	17:25	. . .
			2.5	0.0	3.0	. . .
	F	6	0:13	6:06	12:18	18:16
			0.0	2.5	0.0	3.1
	S	7	1:03	6:55	13:06	19:04
			−0.1	2.6	0.0	3.1
●	S	8	1:50	7:42	13:54	19:50
			−0.2	2.6	0.0	3.2
S	M	9	2:36	8:28	14:40	20:36
			−0.2	2.6	0.0	3.1
	Tu	10	3:20	9:13	15:27	21:20
			−0.2	2.6	0.1	3.1
	W	11	4:08	9:54	16:11	22:04
			−0.1	2.6	0.2	3.0
	Th	12	4:46	10:38	16:57	22:47
			−0.1	2.6	0.2	2.9
	F	13	5:30	11:20	17:42	23:32
			0.0	2.6	0.3	2.8
A	S	14	6:12	12:04	18:30	. . .
			0.1	2.6	0.4	. . .
	S	15	0:16	6:56	12:46	19:18
			2.7	0.2	2.6	0.4
☽	M	16	1:03	7:38	13:30	20:07
			2.6	0.2	2.7	0.4
E	Tu	17	1:50	8:21	14:17	20:59
			2.5	0.3	2.8	0.3
	W	18	2:36	9:05	15:04	21:50
			2.5	0.3	2.8	0.3
	Th	19	3:27	9:50	15:51	22:42
			2.4	0.4	2.9	0.2
	F	20	4:19	10:36	16:41	23:34
			2.4	0.4	3.0	0.1
	S	21	5:11	11:24	17:33	. . .
			2.4	0.3	3.1	. . .
	S	22	0:26	6:04	12:15	18:26
			0.0	2.5	0.3	3.2
N	M	23	1:16	6:58	13:07	19:18
○			−0.1	2.5	0.2	3.3
	Tu	24	2:07	7:51	14:00	20:10
			−0.2	2.6	0.2	3.3
P	W	25	2:58	8:45	14:56	21:03
			−0.2	2.7	0.1	3.3
	Th	26	3:49	9:38	15:52	21:56
			−0.2	2.7	0.1	3.2
	F	27	4:40	10:31	16:50	22:50
			−0.2	2.8	0.1	3.1
	S	28	5:31	11:25	17:50	23:45
			−0.1	2.8	0.1	2.9
	S	29	6:24	12:20	18:53	. . .
			−0.1	2.8	0.2	. . .
E	M	30	0:42	7:18	13:14	19:56
☾			2.8	0.0	2.9	0.2
	Tu	31	1:41	8:13	14:12	21:00
			2.6	0.1	2.9	0.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.: ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	5:36 2.9	11:57 0.0	18:00 2.1	23:58 —0.1
	Tu	2	6:31 3.1	12:54 —0.1	18:58 2.2	. . . . .
N	W	3	0:48 —0.2	7:26 3.2	13:46 —0.2	19:54 2.3
○ P	Th	4	1:48 —0.3	8:20 3.2	14:37 —0.3	20:48 2.4
	F	5	2:38 —0.3	9:12 3.2	15:30 —0.3	21:42 2.5
	S	6	3:34 —0.3	10:05 3.1	16:20 —0.3	22:35 2.6
	S	7	4:30 —0.3	10:58 3.0	17:11 —0.3	23:28 2.6
	M	8	5:28 —0.2	11:50 2.8	18:02 —0.2	. . . . .
E	Tu	9	0:24 2.6	6:28 —0.1	12:47 2.6	18:55 —0.1
	W	10	1:21 2.6	7:32 0.1	13:45 2.4	19:48 —0.1
☾	Th	11	2:21 2.6	8:38 0.2	14:52 2.2	20:45 0.0
	F	12	3:20 2.6	9:45 0.3	15:50 2.1	21:38 0.0
	S	13	4:18 2.6	10:50 0.4	16:57 2.1	22:34 0.1
	S	14	5:12 2.7	11:48 0.4	17:53 2.0	23:25 0.1
	M	15	6:02 2.7	12:38 0.4	18:45 2.0	. . . . .
	Tu	16	0:14 0.1	6:48 2.7	13:19 0.3	19:30 2.1
S A	W	17	0:59 0.1	7:30 2.7	13:54 0.2	20:11 2.1
	Th	18	1:40 0.1	8:10 2.7	14:28 0.2	20:48 2.1
●	F	19	2:18 0.2	8:46 2.7	15:03 0.1	21:20 2.1
	S	20	2:54 0.2	9:21 2.6	15:36 0.0	21:49 2.2
	S	21	3:31 0.2	9:57 2.6	16:12 0.0	22:20 2.2
	M	22	4:09 0.2	10:32 2.5	16:48 0.0	22:56 2.3
	Tu	23	4:50 0.2	11:08 2.4	17:25 0.0	23:36 2.4
E	W	24	5:38 0.1	11:46 2.4	18:04 0.0	. . . . .
	Th	25	0:22 2.4	6:27 0.2	12:30 2.3	18:48 0.1
	F	26	1:13 2.5	7:23 0.2	13:18 2.1	19:35 0.1
☽	S	27	2:09 2.5	8:23 0.2	14:14 2.0	20:30 0.1
	S	28	3:11 2.6	9:28 0.2	15:22 2.0	21:28 0.1
	M	29	4:14 2.7	10:34 0.2	16:35 2.0	22:30 0.0
	Tu	30	5:15 2.8	11:38 0.1	17:42 2.0	23:34 —0.1
N	W	31	6:15 3.0	12:38 0.0	18:45 2.2	. . . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	0:35 —0.2	7:11 3.1	13:32 —0.1	19:42 2.4
○	F	2	1:34 —0.3	8:06 3.1	14:24 —0.2	20:35 2.5
	S	3	2:30 —0.4	8:58 3.1	15:12 —0.3	21:25 2.7
	S	4	3:24 —0.4	9:48 3.0	16:00 —0.4	22:13 2.8
	M	5	4:16 —0.4	10:38 2.9	16:45 —0.4	23:05 2.8
E	Tu	6	5:11 —0.3	11:28 2.7	17:32 —0.3	23:56 2.8
	W	7	6:05 —0.1	12:18 2.5	18:20 —0.2	. . . . .
	Th	8	0:50 2.7	7:01 0.1	13:14 2.3	19:10 —0.1
☾	F	9	1:46 2.7	8:02 0.3	14:15 2.1	20:04 0.0
	S	10	2:44 2.6	9:06 0.4	15:17 2.0	21:00 0.2
	S	11	3:42 2.5	10:12 0.5	16:24 1.9	21:58 0.2
	M	12	4:40 2.5	11:14 0.5	17:25 1.9	22:56 0.3
S	Tu	13	5:30 2.5	12:05 0.5	18:20 2.0	23:58 0.3
A	W	14	6:21 2.5	12:48 0.4	19:05 2.0	. . . . .
	Th	15	0:34 0.2	7:04 2.5	13:23 0.3	19:48 2.1
	F	16	1:16 0.2	7:42 2.6	13:58 0.1	20:16 2.2
	S	17	1:55 0.1	8:19 2.6	14:31 0.0	20:45 2.3
●	S	18	2:34 0.1	8:55 2.6	15:05 —0.1	21:16 2.4
	M	19	3:10 0.0	9:30 2.6	15:40 —0.1	21:50 2.5
E	Tu	20	3:48 0.0	10:05 2.6	16:14 —0.1	22:28 2.5
	W	21	4:31 —0.1	10:42 2.5	16:50 —0.1	23:06 2.6
	Th	22	5:15 0.0	11:19 2.4	17:28 0.0	23:52 2.6
	F	23	6:04 0.0	12:00 2.3	18:11 0.0	. . . . .
	S	24	0:42 2.6	6:59 0.1	12:47 2.1	19:00 0.1
☽	S	25	1:41 2.6	7:57 0.2	13:44 2.0	19:57 0.2
	M	26	2:46 2.6	9:04 0.3	15:00 1.9	21:05 0.2
N	Tu	27	3:54 2.6	10:15 0.3	16:21 1.9	22:16 0.1
	W	28	5:00 2.7	11:23 0.2	17:35 2.1	23:26 0.0
	Th	29	6:02 2.8	12:22 0.1	18:36 2.3	. . . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:27 —0.2	7:00 2.9	13:14 —0.1	19:28 2.5
	S	2	1:25 —0.3	7:52 2.9	14:08 —0.2	20:16 2.7
○	S	3	2:20 —0.4	8:41 3.0	14:48 —0.4	21:08 2.9
E	M	4	3:11 —0.5	9:30 2.9	15:32 —0.4	21:50 3.0
	Tu	5	4:00 —0.4	10:16 2.8	16:15 —0.4	22:38 3.0
	W	6	4:48 —0.3	11:02 2.6	17:00 —0.3	23:26 2.9
	Th	7	5:37 —0.1	11:50 2.4	17:45 —0.2	. . . . .
	F	8	0:16 2.8	6:28 0.1	12:40 2.2	18:32 0.0
	S	9	1:09 2.6	7:22 0.3	13:35 2.0	19:25 0.2
☾	S	10	2:05 2.5	8:21 0.4	14:40 1.9	20:21 0.3
S	M	11	3:02 2.3	9:25 0.5	15:44 1.8	21:23 0.4
A	Tu	12	4:02 2.3	10:25 0.5	16:48 1.9	22:23 0.4
	W	13	4:58 2.3	11:20 0.5	17:42 1.9	23:18 0.4
	Th	14	5:47 2.3	12:04 0.4	18:26 2.0	. . . . .
	F	15	0:06 0.3	6:30 2.4	12:48 0.2	19:02 2.2
	S	16	0:50 0.2	7:10 2.5	13:20 0.1	19:36 2.3
	S	17	1:30 0.1	7:49 2.6	13:55 —0.1	20:10 2.5
●	M	18	2:09 —0.1	8:24 2.6	14:30 —0.1	20:44 2.6
E	Tu	19	2:48 —0.2	9:01 2.6	15:02 —0.2	21:20 2.7
	W	20	3:29 —0.2	9:40 2.6	15:40 —0.2	21:59 2.8
	Th	21	4:11 —0.2	10:16 2.5	16:17 —0.1	22:42 2.8
	F	22	4:56 —0.2	10:54 2.4	16:57 —0.1	23:30 2.8
	S	23	5:45 —0.1	11:37 2.2	17:42 0.0	. . . . .
	S	24	0:21 2.7	6:39 0.1	12:27 2.1	18:36 0.1
N ☽	M	25	1:22 2.6	7:40 0.2	13:31 1.9	19:40 0.2
	Tu	26	2:27 2.5	8:48 0.3	14:50 1.9	20:55 0.2
	W	27	3:40 2.5	10:00 0.3	16:18 2.0	22:11 0.1
P	Th	28	4:48 2.5	11:07 0.2	17:20 2.2	23:20 0.0
	F	29	5:51 2.6	12:03 0.1	18:17 2.5	. . . . .
	S	30	0:21 —0.2	6:46 2.7	12:52 —0.1	19:08 2.7
	S	31	1:16 —0.3	7:37 2.8	13:37 —0.2	19:56 2.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E	M	1	2:06	8:24	14:21	20:42
○			−0.4	2.8	−0.3	3.0
	Tu	2	2:55	9:10	15:08	21:27
			−0.4	2.7	−0.4	3.1
	W	3	3:40	9:56	15:44	22:16
			−0.3	2.6	−0.3	3.0
	Th	4	4:26	10:38	16:26	22:56
			−0.2	2.5	−0.2	2.9
	F	5	5:10	11:22	17:10	23:43
			0.0	2.3	−0.1	2.7
	S	6	5:55	12:08	17:56	. . .
			0.1	2.1	0.1	. . .
	S	7	0:30	6:45	12:56	18:45
			2.5	0.3	2.0	0.3
S	M	8	1:22	7:38	13:52	19:40
			2.3	0.4	1.9	0.4
☾	Tu	9	2:17	8:36	14:57	20:40
A			2.2	0.5	1.8	0.5
	W	10	3:15	9:34	16:00	21:43
			2.1	0.5	1.9	0.5
	Th	11	4:12	10:27	16:53	22:41
			2.1	0.4	2.0	0.5
	F	12	5:04	11:15	17:38	23:31
			2.2	0.3	2.1	0.3
	S	13	5:50	11:56	18:18	. . .
			2.3	0.2	2.3	. . .
	S	14	0:16	6:32	12:36	18:55
			0.2	2.4	0.0	2.5
E	M	15	1:00	7:12	13:14	19:34
			0.0	2.5	−0.1	2.7
	Tu	16	1:42	7:52	13:50	20:11
			−0.2	2.5	−0.2	2.8
●	W	17	2:24	8:33	14:29	20:53
			−0.3	2.5	−0.2	3.0
	Th	18	3:07	9:12	15:07	21:36
			−0.3	2.5	−0.2	3.0
	F	19	3:52	9:52	15:49	22:22
			−0.3	2.4	−0.2	3.0
	S	20	4:38	10:36	16:34	23:12
			−0.3	2.3	−0.1	2.9
	S	21	5:30	11:24	17:24	. . .
			−0.1	2.2	0.0	. . .
N	M	22	0:07	6:26	12:21	18:25
P			2.8	0.0	2.1	0.1
	Tu	23	1:08	7:26	13:32	19:34
			2.6	0.2	2.0	0.2
☽	W	24	2:14	8:36	14:50	20:50
			2.5	0.3	2.0	0.2
	Th	25	3:26	9:43	16:02	22:06
			2.4	0.2	2.2	0.2
	F	26	4:34	10:44	17:04	23:14
			2.4	0.1	2.4	0.0
	S	27	5:36	11:38	17:58	. . .
			2.4	0.0	2.6	. . .
E	S	28	0:12	6:31	12:26	18:48
			−0.1	2.5	−0.1	2.9
	M	29	1:04	7:23	13:10	19:35
			−0.2	2.5	−0.2	3.0
	Tu	30	1:52	8:08	13:58	20:18
			−0.2	2.5	−0.3	3.1
MAY.						
○	W	1	2:36	8:52	14:35	21:03
			−0.2	2.5	−0.3	3.1
	Th	2	3:20	9:32	15:15	21:46
			−0.2	2.4	−0.2	3.0
	F	3	4:02	10:14	15:56	22:28
			−0.1	2.3	−0.1	2.8
	S	4	4:48	10:55	16:37	23:11
			0.0	2.1	0.1	2.7
S	S	5	5:26	11:38	17:20	23:54
			0.1	2.0	0.2	2.5
	M	6	6:10	12:20	18:05	. . .
			0.2	2.0	0.4	. . .
A	Tu	7	0:39	6:56	13:14	18:56
			2.3	0.3	1.9	0.5
	W	8	1:29	7:47	14:12	19:55
			2.2	0.3	1.9	0.6
☾	Th	9	2:22	8:40	15:10	20:57
			2.1	0.3	2.0	0.6
	F	10	3:17	9:34	16:02	21:57
			2.1	0.3	2.1	0.4
	S	11	4:12	10:22	16:50	22:50
			2.1	0.2	2.3	0.3
E	S	12	5:04	11:09	17:33	23:40
			2.2	0.1	2.4	0.1
	M	13	5:50	11:50	18:16	. . .
			2.3	0.0	2.7	. . .
	Tu	14	0:29	6:37	12:34	19:00
			−0.1	2.3	−0.1	2.9
	W	15	1:14	7:23	13:15	19:44
			−0.2	2.4	−0.2	3.0
●	Th	16	2:00	8:06	13:57	20:30
			−0.3	2.4	−0.2	3.1
	F	17	2:47	8:50	14:41	21:17
			−0.4	2.4	−0.2	3.2
	S	18	3:35	9:37	15:29	22:06
			−0.4	2.3	−0.2	3.1
N	S	19	4:24	10:25	16:20	22:58
P			−0.3	2.3	−0.1	3.0
	M	20	5:16	11:19	17:15	23:54
			−0.2	2.2	0.0	2.8
	Tu	21	6:11	12:20	18:19	. . .
			0.0	2.2	0.1	. . .
	W	22	0:54	7:12	13:29	19:29
			2.6	0.1	2.2	0.2
☽	Th	23	2:00	8:15	14:38	20:42
			2.5	0.1	2.3	0.2
	F	24	3:07	9:18	15:44	21:55
			2.4	0.1	2.4	0.1
E	S	25	4:16	10:16	16:43	23:01
			2.3	0.1	2.6	0.1
	S	26	5:20	11:09	17:37	. . .
			2.3	0.0	2.8	. . .
	M	27	0:00	6:16	11:57	18:28
			0.0	2.3	−0.1	2.9
	Tu	28	0.52	7:05	12:43	19:14
			0.0	2.3	−0.2	3.0
	W	29	1:39	7:50	13:26	19:58
			0.0	2.3	−0.2	3.0
○	Th	30	2:21	8:32	14:08	20:41
			0.0	2.3	−0.1	3.0
	F	31	3:01	9:14	14:50	21:22
			0.0	2.2	−0.1	2.9
JUNE.						
S	S	1	3:40	9:54	15:30	22:02
			0.1	2.2	0.1	2.8
	S	2	4:19	10:34	16:10	22:40
			0.1	2.1	0.2	2.6
	M	3	4:58	11:10	16:50	23:20
			0.1	2.0	0.3	2.5
A	Tu	4	5:37	11:50	17:31	. . .
			0.1	2.0	0.4	. . .
	W	5	0:00	6:20	12:36	18:20
			2.3	0.2	2.0	0.5
	Th	6	0:44	7:04	13:26	19:12
			2.2	0.2	2.0	0.5
☾	F	7	1:30	7:54	14:16	20:11
			2.1	0.2	2.1	0.5
	S	8	2:21	8:41	15:10	21:09
			2.1	0.2	2.2	0.4
E	S	9	3:15	9:30	16:00	22:08
			2.1	0.2	2.4	0.3
	M	10	4:12	10:19	16:50	23:04
			2.1	0.1	2.6	0.1
	Tu	11	5:08	11:07	17:41	23:58
			2.1	0.0	2.8	0.0
	W	12	6:02	11:54	18:31	. . .
			2.2	−0.1	3.0	. . .
	Th	13	0:49	6:54	12:44	19:20
			−0.2	2.2	−0.2	3.1
	F	14	1:39	7:43	13:33	20:10
			−0.3	2.3	−0.2	3.2
●	S	15	2:28	8:34	14:24	21:00
N			−0.3	2.3	−0.3	3.2
P	S	16	3:18	9:26	15:16	21:52
			−0.3	2.4	−0.3	3.2
	M	17	4:10	10:19	16:11	22:45
			−0.3	2.4	−0.2	3.0
	Tu	18	5:02	11:12	17:10	23:40
			−0.2	2.4	−0.1	2.9
	W	19	5:57	12:11	18:12	. . .
			−0.2	2.4	0.0	. . .
	Th	20	0:38	6:52	18:14	19:18
			2.6	−0.1	2.5	0.1
☽	F	21	1:40	7:50	14:17	20:27
E			2.5	0.0	2.5	0.1
	S	22	2:43	8:48	15:18	21:36
			2.3	0.0	2.6	0.2
	S	23	3:51	9:44	16:18	22:44
			2.2	0.0	2.7	0.2
	M	24	4:57	10:36	17:13	23:45
			2.2	0.0	2.8	0.2
	Tu	25	5:54	11:30	18:05	. . .
			2.2	0.0	2.8	. . .
	W	26	0:38	6:45	12:18	18:54
			0.2	2.2	−0.1	2.9
	Th	27	1:25	7:32	13:02	19:37
			0.2	2.1	−0.1	2.9
S	F	28	2:05	8:16	13:48	20:20
			0.2	2.1	0.0	2.8
○	S	29	2:43	8:57	14:30	21:02
			0.1	2.1	0.1	2.8
	S	30	3:18	9:37	15:09	21:38
			0.1	2.1	0.1	2.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	3:54	10:10	15:46	22:18
			0.1	2.1	0.2	2.6
	Tu	2	4:29	10:41	16:23	22:49
			0.1	2.1	0.3	2.5
	W	3	5:05	11:18	17:03	23:27
			0.0	2.1	0.3	2.4
	Th	4	5:44	11:59	17:47	. . .
			0.1	2.1	0.3	. . .
	F	5	0:04	6:25	12:42	18:35
			2.3	0.1	2.2	0.3
E	S	6	0:44	7:06	13:30	19:28
			2.2	0.1	2.3	0.3
☾	S	7	1:29	7:52	14:20	20:29
			2.1	0.1	2.3	0.3
	M	8	2:22	8:40	15:16	21:27
			2.1	0.1	2.5	0.2
	Tu	9	3:22	9:33	16:13	22:30
			2.0	0.1	2.6	0.2
	W	10	4:27	10:28	17:08	23:29
			2.0	0.1	2.8	0.1
	Th	11	5:30	11:24	18:05	. . .
			2.1	0.0	3.0	. . .
	F	12	0:26	6:29	12:20	19:00
			0.0	2.1	−0.2	3.1
N	S	13	1:20	7:25	13:17	19:53
			−0.1	2.2	−0.3	3.2
● P	S	14	2:12	8:20	14:12	20:46
			−0.2	2.4	−0.3	3.2
	M	15	3:08	9:14	15:08	21:38
			−0.3	2.5	−0.4	3.1
	Tu	16	3:53	10:07	16:02	22:30
			−0.3	2.6	−0.4	3.0
	W	17	4:43	10:57	17:00	23:23
			−0.3	2.6	−0.3	2.9
	Th	18	5:32	11:50	17.58	. . .
			−0.3	2.7	−0.2	. . .
E	F	19	0:16	6:24	12:49	18:57
			2.7	−0.2	2.7	0.0
	S	20	1:18	7:17	13:48	20:03
			2.4	−0.1	2.7	0.1
☽	S	21	2:17	8:10	14:48	21:08
			2.2	0.0	2.7	0.3
	M	22	3:23	9:08	15:49	22:18
			2.1	0.0	2.7	0.4
	Tu	23	4:27	10:06	16:48	23:23
			2.0	0.1	2.7	0.4
	W	24	5:29	11:03	17:42	. . .
			2.0	0.1	2.7	. . .
	Th	25	0:20	6:25	11:56	18:32
			0.4	2.0	0.1	2.7
S	F	26	1:07	7:14	12:45	19:17
			0.3	2.1	0.1	2.7
	S	27	1:45	8:00	13:30	19:58
			0.3	2.1	0.1	2.7
○ A	S	28	2:20	8:36	14:12	20:36
			0.2	2.1	0.1	2.7
	M	29	2:58	9:10	14:48	21:12
			0.1	2.2	0.1	2.6
	Tu	30	3:25	9:40	15:25	21:46
			0.0	2.2	0.2	2.6
	W	31	4:00	10:10	16:00	22:20
			0.0	2.3	0.2	2.5

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:33	10:44	16:37	22:52
			0.0	2.3	0.2	2.4
E	F	2	5:07	11:21	17:20	23:28
			0.0	2.4	0.2	2.3
	S	3	5:44	12:02	18:04	. . .
			0.0	2.4	0.2	. . .
	S	4	0:07	6:23	12:47	18:54
			2.2	0.1	2.4	0.2
☾	M	5	0:50	7:07	13:41	19:52
			2.2	0.1	2.5	0.2
	Tu	6	1:40	7:57	14:40	20:53
			2.1	0.2	2.5	0.3
	W	7	2:42	8:53	15:44	21:59
			2.0	0.2	2.6	0.2
	Th	8	3:55	9:58	16:45	23:05
			1.9	0.1	2.7	0.2
N	F	9	5:07	11:03	17:45	. . .
			2.0	0.1	2.8	. . .
	S	10	0:08	6:18	12:07	18:43
			0.1	2.1	−0.1	3.0
	S	11	1:05	7:12	13:07	19:38
			−0.1	2.3	−0.3	3.1
P ●	M	12	1:57	8:07	14:04	20:30
			−0.2	2.5	−0.4	3.1
	Tu	13	2:45	8:56	14:58	21:22
			−0.3	2.7	−0.5	3.1
	W	14	3:32	9:44	15:50	22:12
			−0.4	2.8	−0.5	3.0
E	Th	15	4:18	10:35	16:45	23:00
			−0.4	2.9	−0.4	2.8
	F	16	5:05	11:27	17:27	23:51
			−0.4	2.9	−0.3	2.6
	S	17	5:53	12:20	18:33	. . .
			−0.3	2.8	−0.1	. . .
	S	18	0:46	6:48	13:17	19:32
			2.4	−0.2	2.8	0.2
☽	M	19	1:47	7:37	14:16	20:37
			2.2	0.0	2.6	0.3
	Tu	20	2:50	8:33	15:18	21:45
			2.0	0.1	2.6	0.5
	W	21	3:58	9:35	16:18	22:52
			2.0	0.2	2.5	0.5
S	Th	22	5:05	10:36	17:16	23:50
			2.0	0.2	2.5	0.5
	F	23	6:02	11:34	18:07	. . .
			2.0	0.2	2.5	. . .
	S	24	0:36	6:51	12:26	18:53
			0.4	2.1	0.2	2.5
A	S	25	1:13	7:31	13:11	19:33
			0.3	2.2	0.2	2.5
	M	26	1:47	8:07	13:50	20:10
			0.2	2.2	0.1	2.6
○	Tu	27	2:21	8:37	14:26	20:45
			0.0	2.3	0.1	2.6
	W	28	2:52	9:05	15:00	21:16
			0.0	2.4	0.0	2.5
E	Th	29	3:25	9:38	15:37	21:50
			−0.1	2.5	0.0	2.5
	F	30	3:57	10:10	16:15	22:23
			−0.1	2.6	0.0	2.5
	S	31	4:30	10:47	16:56	22:57
			−0.1	2.6	0.0	2.4

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	5:05	11:28	17:40	23:35
			0.0	2.6	0.0	2.3
	M	2	5:45	12:15	18:30	. . .
			0.0	2.6	0.1	. . .
	Tu	3	0:18	6:30	13:10	19:25
			2.1	0.1	2.6	0.2
☾	W	4	1:08	7:23	14:10	20:27
			2.0	0.2	2.5	0.3
N	Th	5	2:15	8:27	15:18	21:36
			1.9	0.2	2.5	0.3
	F	6	3:36	9:40	16:26	22:47
			1.9	0.2	2.6	0.3
	S	7	4:57	10:53	17:30	23:50
			2.0	0.0	2.7	0.1
	S	8	6:00	11:58	18:30	. . .
			2.2	−0.1	2.8	. . .
P	M	9	0:45	6:55	12:58	19:23
			0.0	2.5	−0.3	2.9
●	Tu	10	1:36	7:45	13:58	20:15
			−0.2	2.7	−0.4	3.0
E	W	11	2:20	8:34	14:45	21:02
			−0.4	2.9	−0.5	2.9
	Th	12	3:05	9:23	15:35	21:50
			−0.4	3.0	−0.5	2.8
	F	13	3:50	10:11	16:25	22:37
			−0.4	3.1	−0.4	2.7
	S	14	4:35	11:00	17:14	23:27
			−0.4	3.0	−0.2	2.5
	S	15	5:21	11:51	18:05	. . .
			−0.3	2.9	0.0	. . .
	M	16	0:18	6:10	12:45	19:00
			2.3	−0.1	2.7	0.2
	Tu	17	1:15	7:02	13:42	20:00
			2.1	0.1	2.6	0.4
☽ S	W	18	2:17	8:01	14:42	21:04
			2.0	0.2	2.4	0.5
	Th	19	3:25	9:05	15:45	22:08
			1.9	0.3	2.3	0.5
	F	20	4:32	10:12	16:44	23:06
			1.9	0.4	2.3	0.4
A	S	21	5:28	11:10	17:36	23:52
			2.0	0.4	2.3	0.3
	S	22	6:15	12:00	18:22	. . .
			2.1	0.3	2.4	. . .
	M	23	0:32	6:53	12:43	19:00
			0.2	2.2	0.2	2.4
	Tu	24	1:08	7:25	13:22	19:37
			0.1	2.3	0.1	2.5
	W	25	1:42	8:00	13:58	20:10
			0.0	2.5	0.0	2.5
E ○	Th	26	2:13	8:30	14:35	20:45
			−0.1	2.6	−0.1	2.5
	F	27	2:47	9:03	15:13	21:20
			−0.1	2.7	−0.2	2.5
	S	28	3:20	9:40	15:52	21:55
			−0.1	2.8	−0.2	2.4
	S	29	3:54	10:20	16:35	22:31
			−0.1	2.8	−0.2	2.3
	M	30	4:32	11:03	17:20	23:10
			0.0	2.8	−0.1	2.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	5:15	11:58	18:08	23:57
			0.0	2.7	0.0	2.1
	W	2	6:08	12:48	19:07	. . .
			0.1	2.6	0.1	. . .
N ☾	Th	3	0:54	7:04	13:50	20:10
			2.0	0.2	2.5	0.3
	F	4	2:07	8:15	15:00	21:20
			1.9	0.3	2.4	0.3
	S	5	3:30	9:32	16:10	22:28
			2.0	0.2	2.4	0.2
	S	6	4:42	10:46	17:15	23:28
			2.1	0.1	2.5	0.1
P	M	7	5:43	11:50	18:17	. . .
			2.4	—0.1	2.6	. . .
	Tu	8	0:20	6:37	12:48	19:10
			—0.1	2.7	—0.3	2.7
E	W	9	1:08	7:26	13:40	19:56
			—0.2	2.9	—0.4	2.7
●	Th	10	1:55	8:16	14:30	20:45
			—0.3	3.1	—0.4	2.7
	F	11	2:38	9:00	15:18	21:31
			—0.4	3.2	—0.4	2.6
	S	12	3:21	9:48	16:04	22:17
			—0.4	3.1	—0.3	2.5
	S	13	4:05	10:34	16:50	23:02
			—0.3	3.0	—0.2	2.3
	M	14	4:50	11:22	17:38	23:31
			—0.2	2.9	0.0	2.2
	Tu	15	5:38	12:12	18:28	. . .
			0.0	2.7	0.2	. . .
S	W	16	0:42	6:30	13:05	19:23
			2.0	0.2	2.5	0.3
☽	Th	17	1:40	7:27	14:08	20:20
			1.9	0.4	2.3	0.4
	F	18	2:45	8:30	15:01	21:18
			1.9	0.5	2.2	0.4
A	S	19	3:49	9:35	16:00	22:12
			1.9	0.5	2.1	0.4
	S	20	4:44	10:38	16:52	23:00
			2.0	0.5	2.2	0.3
	M	21	5:28	11:23	17:38	23:43
			2.2	0.4	2.2	0.2
	Tu	22	6:06	12:10	18:20	. . .
			2.3	0.2	2.3	. . .
E	W	23	0:20	6:43	12:48	18:58
			0.1	2.5	0.1	2.3
	Th	24	0:58	7:18	13:30	19:38
			0.0	2.6	—0.1	2.4
○	F	25	1:33	7:55	14:08	20:15
			—0.1	2.8	—0.2	2.4
	S	26	2:10	8:33	14:50	20:52
			—0.1	2.9	—0.3	2.4
	S	27	2:48	9:15	15:32	21:30
			—0.2	3.0	—0.3	2.4
	M	28	3:24	9:58	16:16	22:10
			—0.1	3.0	—0.3	2.3
	Tu	29	4:07	10:45	17:03	22:57
			—0.1	2.9	—0.2	2.2
N	W	30	4:55	11:37	17:55	23:50
			0.0	2.8	0.0	2.1
	Th	31	5:50	12:33	18:52	. . .
			0.1	2.6	0.1	. . .

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	0:54	6:55	13:37	19:55
			2.0	0.2	2.5	0.2
	S	2	2:08	8:10	14:45	21:02
			2.0	0.2	2.4	0.2
P	S	3	3:22	9:25	15:55	22:05
			2.1	0.2	2.3	0.1
	M	4	4:28	10:38	17:00	23:08
			2.3	0.1	2.4	0.1
E	Tu	5	5:25	11:40	17:58	23:54
			2.6	—0.1	2.4	—0.1
	W	6	6:18	12:35	18:58	. . .
			2.8	—0.2	2.5	. . .
	Th	7	0:42	7:07	13:27	19:43
			—0.2	3.0	—0.2	2.5
●	F	8	1:27	7:53	14:15	20:27
			—0.3	3.1	—0.2	2.5
	S	9	2:11	8:40	15:00	21:11
			—0.3	3.2	—0.2	2.4
	S	10	2:55	9:25	15:44	21:55
			—0.3	3.1	—0.2	2.3
	M	11	3:40	10:10	16:29	22:40
			—0.2	3.0	—0.1	2.2
S	Tu	12	4:33	10:55	17:12	23:26
			0.0	2.8	0.0	2.1
	W	13	5:10	11:41	17:57	. . .
			0.1	2.6	0.1	. . .
	Th	14	0:12	5:58	12:29	18:45
			2.0	0.3	2.4	0.2
	F	15	1:10	6:50	13:19	19:35
			2.0	0.4	2.2	0.3
A ☽	S	16	2:08	7:47	14:11	20:25
			2.0	0.5	2.1	0.3
	S	17	3:00	8:47	15:05	21:17
			2.0	0.5	2.1	0.3
	M	18	3:50	9:48	15:57	22:05
			2.1	0.5	2.1	0.3
E	Tu	19	4:37	10:37	16:47	22:50
			2.2	0.4	2.1	0.2
	W	20	5:19	11:25	17:35	23:32
			2.4	0.2	2.1	0.1
	Th	21	6:00	12:12	18:20	. . .
			2.6	0.1	2.2	. . .
	F	22	0:13	6:42	12:57	19:05
			0.0	2.8	—0.1	2.3
	S	23	0:54	7:24	13:42	19:47
			—0.1	2.9	—0.2	2.3
○	S	24	1:38	8:08	14:27	20:28
			—0.2	3.1	—0.3	2.3
	M	25	2:20	8:54	15:13	21:12
			—0.2	3.1	—0.3	2.3
N	Tu	26	3:05	9:41	16:00	21:58
			—0.2	3.1	—0.3	2.3
	W	27	3:58	10:32	16:50	22:50
			—0.1	3.0	—0.2	2.2
P	Th	28	4:47	11:25	17:42	23:48
			0.0	2.8	—0.1	2.2
	F	29	5:45	12:22	18:38	. . .
			0.0	2.7	0.0	. . .
	S	30	0:52	6:52	13:22	19:38
			2.2	0.1	2.5	0.1

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	2:00	8:02	14:28	20:38
			2.3	0.2	2.3	0.1
E	M	2	3:05	9:15	15:35	21:37
			2.4	0.2	2.3	0.1
	Tu	3	4:08	10:25	16:40	22:33
			2.5	0.1	2.2	0.0
	W	4	5:05	11:28	17:44	23:27
			2.7	0.1	2.2	—0.1
	Th	5	5:57	12:25	18:37	. . .
			2.9	0.0	2.3	. . .
	F	6	0:15	6:48	13:16	19:25
			—0.2	3.0	0.0	2.3
	S	7	1:04	7:35	14:02	20:10
			—0.2	3.1	0.0	2.3
●	S	8	1:49	8:20	14:45	20:55
			—0.2	3.0	0.0	2.2
S	M	9	2:34	9:05	15:26	21:38
			—0.2	3.0	0.0	2.2
	Tu	10	3:18	9:47	16:07	22:22
			—0.1	2.8	0.0	2.2
	W	11	4:00	10:29	16:46	23:02
			0.1	2.7	0.0	2.1
	Th	12	4:48	11:10	17:27	23:45
			0.2	2.5	0.1	2.1
	F	13	5:26	11:52	18:07	. . .
			0.3	2.4	0.1	. . .
A	S	14	0:30	6:18	12:34	18:51
			2.1	0.4	2.2	0.2
	S	15	1:16	7:03	13:18	19:37
			2.1	0.5	2.1	0.2
☽	M	16	2:05	7:55	14:05	20:22
			2.1	0.5	2.0	0.2
E	Tu	17	2:55	8:50	14:50	21:10
			2.2	0.5	2.0	0.2
	W	18	3:43	9:47	15:50	21:57
			2.3	0.4	2.0	0.2
	Th	19	4:31	10:42	16:45	22:45
			2.4	0.3	2.0	0.1
	F	20	5:20	11:35	17:40	23:32
			2.7	0.1	2.1	0.1
	S	21	6:08	12:28	18:30	. . .
			2.8	0.0	2.1	. . .
	S	22	0:20	6:57	13:18	19:20
			—0.1	3.0	—0.2	2.2
N ○	M	23	1:10	7:47	14:07	20:10
			—0.2	3.1	—0.3	2.3
	Tu	24	2:00	8:37	14:55	21:00
			—0.2	3.2	—0.3	2.3
P	W	25	2:51	9:27	15:45	21:52
			—0.2	3.1	—0.3	2.4
	Th	26	3:45	10:18	16:35	22:43
			—0.2	3.0	—0.3	2.4
	F	27	4:41	11:10	17:27	23:39
			—0.2	2.9	—0.2	2.4
	S	28	5:40	12:06	18:20	. . .
			—0.1	2.7	—0.2	. . .
	S	29	0:38	6:43	13:08	19:14
			2.5	0.0	2.5	—0.1
E ☾	M	30	1:40	7:48	14:05	20:10
			2.5	0.1	2.3	0.0
	Tu	31	2:42	8:58	15:12	21:08
			2.6	0.2	2.2	0.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	0:15 0.1	7:05 3.0	14:20 0.2	19:20 2.0
	Tu	2	1:12 0.1	7:54 3.1	15:13 0.1	20:08 2.0
N	W	3	2:30 0.1	8:48 3.1	16:08 0.0	21:03 2.1
○ P	Th	4	3:12 0.1	9:39 3.1	16:59 −0.1	21:58 2.2
	F	5	4:48 0.1	10:31 3.0	17:48 −0.2	22:58 2.2
	S	6	5:50 0.1	11:28 2.9	18:35 −0.2	23:48 2.3
	S	7	6:50 0.1	12:12 2.8	19:23 −0.2	. . . . .
	M	8	0:44 2.4	7:47 0.1	13:02 2.6	20:10 −0.2
E	Tu	9	1:40 2.5	8:43 0.1	13:53 2.4	20:58 −0.1
	W	10	2:32 2.5	9:38 0.2	14:42 2.2	21:45 −0.1
☾	Th	11	3:27 2.5	10:35 0.2	15:33 2.1	22:33 0.0
	F	12	4:18 2.6	11:30 0.3	16:32 1.9	23:22 0.1
	S	13	5:10 2.6	12:24 0.3	17:13 1.8	. . . . .
	S	14	0:10 0.2	5:57 2.6	13:18 0.3	18:05 1.7
	M	15	0:58 0.3	6:43 2.6	14:10 0.3	18:54 1.7
	Tu	16	1:45 0.4	7:28 2.6	14:58 0.3	19:40 1.7
S A	W	17	2:32 0.5	8:12 2.7	15:44 0.2	20:28 1.8
	Th	18	3:18 0.5	8:55 2.7	16:28 0.2	21:15 1.9
●	F	19	4:02 0.5	9:39 2.7	17:10 0.1	22:02 2.0
	S	20	4:47 0.5	10:23 2.7	17:51 0.1	22:48 2.1
	S	21	5:32 0.4	11:08 2.7	18:28 0.1	23:35 2.2
	M	22	6:18 0.4	11:55 2.6	19:03 0.1	. . . . .
	Tu	23	0:20 2.4	7:06 0.4	12:40 2.5	19:38 0.1
E	W	24	1:10 2.5	8:00 0.4	13:28 2.4	20:10 0.1
	Th	25	2:00 2.6	8:52 0.4	14:14 2.3	20:43 0.1
	F	26	2:51 2.7	9:48 0.3	15:04 2.1	21:16 0.1
☽	S	27	3:44 2.8	10:46 0.3	15:55 2.0	21:57 0.1
	S	28	4:38 2.9	11:47 0.3	16:50 2.0	22:43 0.2
	M	29	5:35 2.9	12:50 0.3	17:47 1.9	23:45 0.2
	Tu	30	6:33 2.9	13:49 0.2	18:45 2.0	. . . . .
N	W	31	1:02 0.2	7:30 2.9	14:48 0.1	19:44 2.0

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	2:22 0.1	8:25 2.9	15:41 0.0	20:41 2.2
○	F	2	3:57 0.1	9:18 2.9	16:32 −0.1	21:37 2.3
	S	3	4:40 0.1	10:11 2.9	17:20 −0.1	22:32 2.4
	S	4	5:38 0.0	11:00 2.8	18:08 −0.2	23:26 2.5
	M	5	6:33 0.0	11:49 2.6	18:54 −0.2	. . . . .
E	Tu	6	0:20 2.6	7:27 0.0	12:37 2.5	19:40 −0.2
	W	7	1:12 2.6	8:18 0.1	13:24 2.4	20:28 −0.1
	Th	8	2:02 2.6	9:10 0.2	14:18 2.2	21:12 0.0
☾	F	9	2:52 2.6	10:08 0.2	15:00 2.0	22:00 0.1
	S	10	3:42 2.6	10:55 0.3	15:50 1.9	22:47 0.1
	S	11	4:31 2.5	11:48 0.3	16:40 1.8	23:35 0.3
	M	12	5:20 2.5	12:40 0.4	17:32 1.7	. . . . .
S	Tu	13	0:25 0.4	6:07 2.5	13:35 0.4	18:24 1.7
A	W	14	1:13 0.6	6:55 2.5	14:28 0.3	19:15 1.8
	Th	15	2:05 0.5	7:42 2.5	15:12 0.3	20:03 1.9
	F	16	2:54 0.5	8:27 2.6	15:57 0.3	20:50 2.0
	S	17	3:43 0.4	9:13 2.6	16:37 0.2	21:38 2.2
●	S	18	4:33 0.4	10:00 2.6	17:16 0.1	22:23 2.3
	M	19	5:20 0.3	10:47 2.6	17:52 0.1	23:10 2.5
E	Tu	20	6:08 0.3	11:32 2.5	18:28 0.1	23:56 2.7
	W	21	7:00 0.2	12:18 2.4	19:03 0.1	. . . . .
	Th	22	0:46 2.8	7:47 0.2	13:05 2.3	19:34 0.1
	F	23	1:34 2.8	8:37 0.2	13:50 2.2	20:08 0.1
	S	24	2:25 2.9	9:30 0.2	14:38 2.1	20:45 0.1
☽	S	25	3:17 2.8	10:26 0.3	15:30 2.0	21:30 0.2
	M	26	4:13 2.8	11:22 0.3	16:25 2.0	22:32 0.2
N	Tu	27	5:12 2.8	12:24 0.3	17:24 2.0	23:48 0.3
	W	28	6:12 2.7	13:22 0.3	18:26 2.0	. . . . .
	Th	29	1:10 0.2	7:10 2.7	14:20 0.2	19:26 2.1

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	2:24 0.1	8:04 2.7	15:12 0.1	20:23 2.3
	S	2	3:30 0.1	8:57 2.7	16:02 0.0	21:18 2.5
○	S	3	4:28 0.0	9:47 2.6	16:51 −0.1	22:11 2.6
E	M	4	5:22 0.0	10:35 2.6	17:36 −0.1	23:02 2.7
	Tu	5	6:13 0.0	11:22 2.5	18:23 −0.1	23:52 2.8
	W	6	7:02 0.0	12:08 2.4	19:08 −0.1	. . . . .
	Th	7	0:40 2.8	7:52 0 0	12:58 2.2	19:56 0.0
	F	8	1:27 2.7	8:40 0.1	13:40 2.1	20:40 0.1
	S	9	2:15 2.7	9:30 0.2	14:29 2.0	21:28 0.2
☾	S	10	3:02 2.6	10:17 0.3	15:19 1.9	22:13 0.3
S	M	11	3:50 2.5	11:08 0.3	16:10 1.8	23:00 0.5
A	Tu	12	4:40 2.4	12:00 0.4	17:08 1.8	23:51 0.5
	W	13	5:30 2.4	12:51 0.4	17:55 1.8	. . . . .
	Th	14	0:42 0.5	6:20 2.4	13:42 0.4	18:47 1.9
	F	15	1:38 0.5	7:12 2.4	14:30 0.3	19:37 2.0
	S	16	2:32 0.5	8:00 2.4	15:00 0.3	20:24 2.2
	S	17	3:25 0.4	8:48 2.4	15:56 0.3	21:11 2.4
●	M	18	4:17 0.3	9:37 2.4	16:37 0.2	21:57 2.6
E	Tu	19	5:05 0.2	10:28 2.4	17:11 0.2	22:43 2.8
	W	20	5:55 0.1	11:09 2.4	17:46 0.1	23:32 2.9
	Th	21	6:43 0.1	11:55 2.3	18:23 0.1	. . . . .
	F	22	0:20 3.0	7:32 0.1	12:40 2.2	19:02 0.1
	S	23	1:08 3.0	8:22 0.1	13:27 2.1	19:45 0.1
	S	24	2:00 2.9	9:18 0.2	14:17 2.1	20:35 0.2
N ☽	M	25	2:53 2.8	10:05 0.2	15:10 2.0	21:32 0.2
	Tu	26	3:50 2.7	11:00 0.3	16:08 2.0	22:48 0.3
	W	27	4:48 2.6	11:58 0.3	17:08 2.1	. . . . .
P	Th	28	0:03 0.3	5:48 2.5	12:53 0.3	18:12 2.2
	F	29	1:13 0.2	6:47 2.4	13:47 0.2	19:10 2.3
	S	30	2:20 0.2	7:40 2.4	14:40 0.1	20:05 2.5
	S	31	3:19 0.1	8:31 2.4	15:29 0.1	20:58 2.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	4:10 0.0	9:18 2.4	16:15 0.0	21:45 2.8
	Tu	2	5:00 0.0	10:05 2.3	17:02 0.0	22:33 2.8
	W	3	5:50 −0.1	10:51 2.3	17:48 0.0	23.19 2.8
	Th	4	6:35 −0.1	11:38 2.2	18:33 . . . 0.1 . . .	
	F	5	0:05 2.8	7:21 0.0	12:22 2.1	19:18 0.2
	S	6	0:48 2.8	8:07 0.1	13:10 2.1	20:02 0.2
	S	7	1:33 2.7	8:53 0.1	13:57 2.0	20:48 0.4
S	M	8	2:20 2.6	9:40 0.2	14:46 1.9	21:33 0.5
☾ A	Tu	9	3:07 2.5	10:27 0.3	15:38 1.9	22:21 0.6
	W	10	3:57 2.4	11:14 0.4	16:31 1.9	23:15 0.6
	Th	11	4:50 2.3	12:08 0.4	17:24 . . . 2.0 . . .	
	F	12	0:10 0.6	5:43 2.3	12:52 0.4	18:17 2.1
	S	13	1:10 0.5	6:37 2.2	13:38 0.4	19:06 2.3
	S	14	2:08 0.4	7:30 2.2	14:21 0.3	19:55 2.5
E	M	15	3:08 0.3	8:19 2.2	15:01 0.3	20:43 2.7
	Tu	16	3:55 0.2	9:08 2.2	15:49 0.2	21:31 2.9
●	W	17	4:47 0.1	9:57 2.2	16:20 0.2	22:20 3.0
	Th	18	5:36 0.0	10:41 2.2	17:04 0.1	23:07 3.1
	F	19	6:25 −0.1	11:29 2.2	17:52 0.1	23:55 3.1
	S	20	7:14 −0.1	12:17 2.1	18:38 . . . 0.2 . . .	
	S	21	0:45 3.0	8:08 0.0	13:07 2.1	19:38 0.2
N P	M	22	1:36 2.9	8:54 0.1	13:59 2.1	20:37 0.3
	Tu	23	2:30 2.7	9:45 0.1	14:55 2.1	21:43 0.3
☽	W	24	3:26 2.6	10:37 0.2	15:55 2.1	22:53 0.3
	Th	25	4:25 2.4	11:29 0.2	16:56 . . . 2.2 . . .	
	F	26	0:02 0.3	5:25 2.3	12:22 0.2	17:55 2.4
	S	27	1:07 0.3	6:20 2.2	13:15 0.2	18:53 2.5
E	S	28	2:06 0.2	7:12 2.2	14:05 0.1	19:45 2.6
	M	29	3:00 0.1	8:01 2.1	14:56 0.1	20:33 2.7
	Tu	30	3:52 0.0	8:50 2.1	15:43 0.1	21:20 2.8

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	4:40 0.0	9:36 2.1	16:30 0.1	22:13 2.9
	Th	2	5:25 0.0	10:23 2.1	17:15 0.2	22:48 2.9
	F	3	6:10 0.0	11:07 2.1	18:00 0.2	23:32 2.9
	S	4	6:54 0.0	11:58 2.0	18:43 . . . 0.3 . . .	
S	S	5	0:13 2.8	7:37 0.0	12:40 2.0	19:27 0.4
	M	6	1:00 2.7	8:22 0.1	13:28 2.0	20:09 0.5
A	Tu	7	1:43 2.6	9:05 0.2	14:17 2.0	20:56 0.6
	W	8	2:30 2.5	9:48 0.2	15:08 2.0	21:42 0.6
☾	Th	9	3:20 2.4	10:30 0.3	16:00 2.1	22:35 0.6
	F	10	4:12 2.3	11:09 0.3	16:55 2.2	23:37 0.6
	S	11	5:08 2.2	11:50 0.3	17:45 . . . 2.4 . . .	
E	S	12	0:40 0.5	6:08 2.1	12:33 0.3	18:37 2.6
	M	13	1:41 0.3	6:58 2.1	13:17 0.3	19:27 2.8
	Tu	14	2:40 0.2	7:38 2.1	14:07 0.2	20:17 3.0
	W	15	3:35 0.1	8:38 2.1	14:52 0.2	21:07 3.1
●	Th	16	4:26 0.0	9:27 2.1	15:43 0.2	21:55 3.2
	F	17	5:17 −0.1	10:17 2.1	16:33 0.1	22:45 3.2
	S	18	6:07 −0.1	11:06 2.1	17:32 0.1	23:35 3.1
N P	S	19	6:57 −0.1	11:57 2.1	18:33 . . . 0.2 . . .	
	M	20	0:25 3.0	7:45 −0.1	12:51 2.2	19:36 0.2
	Tu	21	1:17 2.9	8:36 −0.1	13:45 2.2	20:43 0.2
	W	22	2:12 2.7	9:23 0.0	14:43 2.3	21:45 0.3
☽	Th	23	3:07 2.5	10:13 0.0	15:43 2.3	22:49 0.3
	F	24	4:03 2.3	11:03 0.1	16:41 2.4	23:50 0.3
E	S	25	4:57 2.1	11:52 0.1	17:38 . . . 2.5 . . .	
	S	26	0:50 0.3	5:52 2.0	12:42 0.1	18:30 2.6
	M	27	1:47 0.2	6:42 2.0	13:38 0.2	19:22 2.7
	Tu	28	2:40 0.1	7:32 1.9	14:23 0.2	20:08 2.8
	W	29	3:30 0.1	8:20 1.9	15:11 0.2	20:52 2.8
○	Th	30	4:17 0.0	9:06 1.9	15:58 0.3	21:35 2.9
	F	31	5:02 0.0	9:53 1.9	16:44 0.3	22:17 2.9

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	5:45 0.0	10:40 1.9	17:30 0.4	23:00 2.8
	S	2	6:25 0.0	11:26 2.0	18:10 0.4	23:42 2.8
	M	3	7:10 0.0	12:12 2.0	18:52 . . . 0.5 . . .	
A	Tu	4	0:27 2.7	7:50 0.1	12:58 2.0	19:38 0.5
	W	5	1:11 2.6	8:30 0.1	13:47 2.1	20:22 0.6
	Th	6	1:58 2.5	9:10 0.2	14:37 2.2	21:12 0.6
☾	F	7	2:48 2.3	9:45 0.2	15:28 2.3	22:07 0.5
	S	8	3:41 2.2	10:17 0.2	16:20 2.4	23:08 0.5
E	S	9	4:33 2.1	10:53 0.2	17:13 . . . 2.6 . . .	
	M	10	0:10 0.4	5:27 2.0	11:31 0.2	18:05 2.8
	Tu	11	1:12 0.3	6:22 2.0	12:20 0.2	18:57 2.9
	W	12	2:13 0.2	7:15 2.0	13:08 0.2	19:50 3.1
	Th	13	3:10 0.1	8:08 2.0	14:06 0.1	20:42 3.1
	F	14	4:05 0.0	9:00 2.0	15:05 0.1	21:38 3.2
● N	S	15	4:56 −0.1	9:52 2.1	16:17 0.1	22:24 3.2
P	S	16	5:45 −0.1	10:45 2.2	17:25 0.1	23:15 3.1
	M	17	6:34 −0.1	11:40 2.2	18:30 . . . 0.1 . . .	
	Tu	18	0:07 2.9	7:23 −0.2	12:34 2.3	19:33 0.1
	W	19	0:59 2.8	8:10 −0.2	13:32 2.4	20:33 0.2
	Th	20	1:50 2.6	8:58 −0.1	14:28 2.4	21:32 0.2
☽ E	F	21	2:43 2.4	9:47 −0.1	15:23 2.5	22:32 0.2
	S	22	3:37 2.2	10:35 0.0	16:22 2.5	23:30 0.3
	S	23	4:29 2.0	11:23 0.1	17:15 . . . 2.6 . . .	
	M	24	0:27 0.3	5:22 1.9	12:13 0.2	18:05 2.6
	Tu	25	1:22 0.3	6:13 1.8	13:02 0.2	18:54 2.7
	W	26	2:15 0.2	7:03 1.8	13:58 0.3	19:40 2.7
	Th	27	3:05 0.2	7:51 1.8	14:43 0.4	20:23 2.7
S	F	28	3:52 0.1	8:38 1.8	15:53 0.4	21:06 2.8
○	S	29	4:37 0.1	9:25 1.8	16:17 0.4	21:48 2.8
	S	30	5:20 0.1	10:12 1.9	17:00 0.5	22:30 2.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	6:00	10:57	17:40	23:14
			0.1	2.0	0.5	2.7
	Tu	2	6:41	11:43	18:25	23:57
			0.1	2.1	0.5	2.6
	W	3	7:18	12:30	19:08	. . .
			0.1	2.2	0.5	. . .
	Th	4	0:48	7:55	13:18	20:00
			2.5	0.1	2.3	0.5
	F	5	1:30	8:29	14:07	20:48
			2.4	0.1	2.4	0.5
E	S	6	2:18	9:00	14:57	21:43
			2.3	0.2	2.5	0.5
☾	S	7	3:08	9:30	15:48	22:40
			2.2	0.2	2.7	0.4
	M	8	4:00	10:02	16:40	23:42
			2.1	0.2	2.8	0.4
	Tu	9	4:55	10:45	17:35	. . .
			2.0	0.2	2.9	. . .
	W	10	0:44	5:47	11:33	18:30
			0.3	1.9	0.2	3.0
	Th	11	1:46	6:42	12:28	19:25
			0.2	1.9	0.2	3.0
	F	12	2:43	7:39	13:39	20:20
			0.1	2.0	0.1	3.1
N	S	13	3:38	8:35	15:02	21:12
			0.0	2.1	0.1	3.1
● P	S	14	4:31	9:30	16:15	22:05
			0.0	2.2	0.1	3.0
	M	15	5:20	10:25	17:21	22:57
			−0.1	2.3	0.1	2.9
	Tu	16	6:10	11:20	18:22	23:47
			−0.2	2.4	0.1	2.8
	W	17	6:57	12:15	19:20	. . .
			−0.2	2.5	0.1	. . .
	Th	18	0:38	7:43	13:10	20:15
			2.7	−0.2	2.6	0.1
E	F	19	1:27	8:30	14:05	21:12
			2.5	−0.2	2.6	0.1
	S	20	2:18	9:20	14:58	22:07
			2.3	−0.1	2.6	0.2
☽	S	21	3:08	10:07	15:52	23:02
			2.1	0.0	2.6	0.2
	M	22	4:00	10:55	16:48	23:58
			2.0	0.1	2.6	0.3
	Tu	23	4:50	11:45	17:32	. . .
			1.8	0.2	2.6	. . .
	W	24	0:53	5:42	12:36	18:22
			0.3	1.8	0.3	2.6
	Th	25	1:46	6:33	13:28	19:09
			0.3	1.7	0.4	2.6
S	F	26	2:36	7:23	14:29	19:53
			0.3	1.7	0.4	2.6
	S	27	3:24	8:12	15:07	20:37
			0.2	1.8	0.5	2.6
○ A	S	28	4:08	9:00	15:55	21:20
			0.2	1.9	0.5	2.6
	M	29	4:51	9:45	16:40	22:05
			0.2	2.0	0.5	2.6
	Tu	30	5:31	10:30	17:23	22:48
			0.1	2.1	0.4	2.6
	W	31	6:10	11:15	18:07	23:32
			0.1	2.2	0.4	2.6

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	6:45	12:01	18:52	. . .
			0.1	2.4	0.4	. . .
E	F	2	0:18	7:18	12:48	19:39
			2.5	0.1	2.5	0.4
	S	3	1:03	7:47	13:35	20:27
			2.4	0.1	2.6	0.3
	S	4	1:50	8:15	14:25	21:22
			2.3	0.1	2.7	0.3
☾	M	5	2:38	8:45	15:16	22:17
			2.2	0.1	2.8	0.3
	Tu	6	3:30	9:27	16:10	23:14
			2.0	0.2	2.8	0.3
	W	7	4:22	10:13	17:05	. . .
			2.0	0.2	2.9	. . .
	Th	8	0:15	5:18	11:08	18:03
			0.3	1.9	0.2	2.9
N	F	9	1:18	6:16	12:13	19:01
			0.3	1.9	0.2	2.9
	S	10	2:17	7:14	13:42	19:58
			0.2	2.0	0.2	2.9
	S	11	3:12	8:13	15:02	20:52
			0.1	2.2	0.1	2.9
P ●	M	12	4:08	9:10	16:10	21:45
			0.0	2.3	0.1	2.8
	Tu	13	4:52	10:05	17:10	22:35
			−0.1	2.5	0.0	2.8
	W	14	5:40	11:00	18:07	23:25
			−0.1	2.6	0.0	2.8
E	Th	15	6:27	11:52	19:00	. . .
			−0.2	2.7	0.0	. . .
	F	16	0:18	7:13	12:44	19:58
			2.5	−0.2	2.7	0.0
	S	17	1:01	8:01	13:35	20:46
			2.4	−0.2	2.7	0.1
	S	18	1:50	8:50	14:27	21:38
			2.2	−0.1	2.7	0.1
☽	M	19	2:39	9:40	15:18	22:32
			2.1	0.0	2.6	0.2
	Tu	20	3:29	10:27	16:08	23:23
			2.0	0.1	2.6	0.3
	W	21	4:20	11:18	16:58	. . .
			1.8	0.3	2.5	. . .
S	Th	22	0:18	5:18	12:10	17:47
			0.3	1.8	0.4	2.5
	F	23	1:10	6:00	13:02	18:37
			0.3	1.8	0.5	2.5
	S	24	2:00	6:57	13:57	19:23
			0.3	1.8	0.5	2.5
A	S	25	2:50	7:47	14:47	20:08
			0.3	1.9	0.5	2.5
	M	26	3:35	8:34	15:35	20:55
			0.3	2.0	0.5	2.5
○	Tu	27	4:17	9:18	16:22	21:40
			0.2	2.2	0.4	2.5
	W	28	4:56	10:03	17:05	22:24
			0.2	2.3	0.3	2.5
E	Th	29	5:32	10:48	17:55	23:09
			0.2	2.5	0.3	2.5
	F	30	6:04	11:34	18:37	23:54
			0.2	2.6	0.2	2.4
	S	31	6:34	12:19	19:23	. . .
			0.2	2.8	0.2	. . .

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	0:40	7:03	13:07	20:12
			2.3	0.1	2.8	0.2
	M	2	1:24	7:33	13:55	21:01
			2.2	0.1	2.9	0.2
	Tu	3	2:12	8:17	14:48	21:53
			2.1	0.2	2.9	0.3
☾	W	4	3:02	9:22	15:42	22:50
			2.0	0.2	2.8	0.3
N	Th	5	3:57	9:52	16:40	23:49
			2.0	0.2	2.8	0.3
	F	6	4:55	11:18	17:40	. . .
			2.0	0.2	2.7	. . .
	S	7	0:47	5:55	12:27	18:40
			0.3	2.1	0.3	2.7
	S	8	1:45	6:55	13:51	19:35
			0.2	2.2	0.2	2.6
P	M	9	2:40	7:56	15:00	20:30
			0.2	2.3	0.1	2.6
●	Tu	10	3:31	8:51	16:00	21:20
			0.1	2.5	0.0	2.6
E	W	11	4:20	9:45	16:57	22:10
			0.0	2.7	0.0	2.5
	Th	12	5:08	10:36	17:48	22:59
			−0.1	2.8	−0.1	2.5
	F	13	5:57	11:27	18:40	23:46
			−0.1	2.8	−0.1	2.4
	S	14	6:45	12:17	19:28	. . .
			−0.1	2.9	0.0	. . .
	S	15	0:32	7:32	13:05	20:18
			2.3	0.0	2.8	0.0
	M	16	1:20	8:20	13:52	21:07
			2.2	0.0	2.7	0.1
	Tu	17	2:10	9:08	14:40	21:57
			2.0	0.2	2.6	0.2
☽ S	W	18	3:00	9:57	15:30	22:48
			1.9	0.3	2.5	0.3
	Th	19	3:52	10:48	16:20	23:40
			1.9	0.4	2.4	0.3
	F	20	4:47	11:40	17:10	. . .
			1.8	0.5	2.3	. . .
A	S	21	0:30	5:40	12:35	18:02
			0.4	1.8	0.5	2.3
	S	22	1:22	6:32	13:30	18:51
			0.4	1.9	0.5	2.3
	M	23	2:10	7:20	14:23	19:40
			0.4	2.1	0.5	2.3
	Tu	24	2:53	8:07	15:13	20:27
			0.3	2.2	0.4	2.3
	W	25	3:35	8:50	16:01	21:13
			0.3	2.4	0.3	2.3
E ○	Th	26	4:12	9:35	16:48	22:00
			0.3	2.6	0.2	2.3
	F	27	4:45	10:21	17:35	22:43
			0.2	2.8	0.1	2.3
	S	28	5:20	11:06	18:20	23:29
			0.2	2.9	0.1	2.3
	S	29	5:53	11:53	19:07	. . .
			0.2	3.0	0.1	. . .
	M	30	0:12	6:22	12:40	19:57
			2.2	0.2	3.0	0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	1:00	7:08	13:30	20:44
			2.1	0.3	3.0	0.1
	W	2	1:50	7:50	14:22	21:35
			2.1	0.3	2.9	0.2
N ☾	Th	3	2:43	8:50	15:18	22:28
			2.0	0.3	2.8	0.2
	F	4	3:38	10:01	16:17	23:22
			2.1	0.4	2.6	0.3
	S	5	4:39	11:22	17:17	. . .
			2.1	0.4	2.5	. . .
	S	6	0:18	5:41	12:42	18:17
			0.3	2.2	0.4	2.4
P	M	7	1:13	6:52	13:50	19:12
			0.2	2.4	0.2	2.4
	Tu	8	2:07	7:38	14:50	20:05
			0.2	2.5	0.2	2.4
E	W	9	2:57	8:32	15:47	20:55
			0.2	2.7	0.0	2.4
●	Th	10	3:48	9:22	16:38	21:43
			0.1	2.8	0.0	2.4
	F	11	4:36	10:12	17:27	22:30
			0.1	2.9	—0.1	2.3
	S	12	5:25	11:00	18:16	23:17
			0.1	3.0	—0.1	2.2
	S	13	6:12	11:45	19:02	. . .
			0.1	2.9	—0.1	. . .
	M	14	0:03	6:58	12:30	19:50
			2.2	0.2	2.9	0.0
	Tu	15	0:50	7:47	13:16	20:35
			2.1	0.3	2.8	0.1
S	W	16	1:40	8:38	14:02	21:23
			2.0	0.4	2.6	0.1
☽	Th	17	2:30	9:23	14:50	22:11
			2.0	0.5	2.5	0.2
	F	18	3:25	10:15	15:39	22:58
			2.0	0.6	2.4	0.3
A	S	19	4:18	11:13	16:30	23:46
			2.0	0.6	2.3	0.4
	S	20	5:10	12:05	17:25	. . .
			2.0	0.6	2.2	. . .
	M	21	0:32	6:02	13:02	18:17
			0.4	2.1	0.5	2.2
	Tu	22	1:20	6:50	13:54	19:08
			0.4	2.3	0.5	2.2
E	W	23	2:02	7:37	14:47	19:58
			0.4	2.5	0.3	2.2
	Th	24	2:40	8:22	15:38	20:45
			0.4	2.7	0.2	2.2
○	F	25	3:17	9:10	16:28	21:32
			0.4	2.8	0.1	2.2
	S	26	3:53	9:55	17:15	22:18
			0.3	3.0	0.0	2.2
	S	27	4:35	10:42	18:03	23:05
			0.3	3.1	—0.1	2.2
	M	28	5:15	11:30	18:30	23:52
			0.3	3.1	—0.1	2.2
	Tu	29	6:01	12:20	19:39	. . .
			0.3	3.1	0.0	. . .
N	W	30	0:39	6:58	13:09	20:27
			2.1	0.3	3.0	0.0
	Th	31	1:32	8:00	14:00	21:15
			2.1	0.4	2.8	0.1
NOVEMBER.						
☾	F	1	2:27	9:06	14:57	22:07
			2.1	0.4	2.6	0.2
	S	2	3:27	10:19	15:55	23:00
			2.2	0.4	2.4	0.2
P	S	3	4:27	11:33	16:55	23:50
			2.3	0.4	2.3	0.2
	M	4	5:26	12:37	17:50	. . .
			2.4	0.3	2.2	. . .
E	Tu	5	0:41	6:24	13:38	18:45
			0.3	2.5	0.2	2.1
	W	6	1:33	7:19	14:36	19:37
			0.3	2.7	0.1	2.1
	Th	7	2:27	8:10	15:29	20:27
			0.2	2.8	0.0	2.1
●	F	8	3:15	8:58	16:19	21:13
			0.2	2.9	0.0	2.1
	S	9	4:05	9:45	17:06	22:01
			0.2	3.0	—0.1	2.1
	S	10	4:53	10:30	17:52	22:48
			0.3	3.0	—0.1	2.1
	M	11	5:42	11:18	18:38	23:35
			0.4	2.9	—0.1	2.1
S	Tu	12	6:28	11:57	19:20	. . .
			0.4	2.8	0.0	. . .
	W	13	0:22	7:15	12:41	20:05
			2.1	0.5	2.7	0.0
	Th	14	1:12	8:02	13:26	20:49
			2.0	0.6	2.6	0.1
	F	15	2:03	8:53	14:12	21:33
			2.0	0.6	2.5	0.2
A ☽	S	16	2:53	9:40	15:01	22:16
			2.1	0.6	2.3	0.3
	S	17	3:45	10:35	15:54	22:58
			2.1	0.6	2.2	0.4
	M	18	4:37	11:30	16:47	23:42
			2.2	0.6	2.1	0.4
E	Tu	19	5:27	12:26	17:40	. . .
			2.4	0.5	2.1	. . .
	W	20	0:13	6:17	13:24	18:34
			0.4	2.5	0.4	2.0
	Th	21	0:55	7:06	14:22	19:25
			0.4	2.7	0.2	2.0
	F	22	1:30	7:55	15:14	20:16
			0.4	2.9	0.1	2.0
	S	23	2:14	8:43	16:05	21:02
			0.3	3.0	0.0	2.0
○	S	24	3:08	9:32	16:55	21:55
			0.3	3.1	—0.1	2.1
	M	25	3:56	10:20	17:45	22:41
			0.3	3.2	—0.1	2.1
N	Tu	26	4:59	11:10	18:32	23:32
			0.3	3.1	—0.1	2.2
	W	27	5:57	11:59	19:20	. . .
			0.3	3.0	—0.1	. . .
P	Th	28	0:23	7:03	12:50	20:07
			2.2	0.3	2.9	0.0
	F	29	1:17	8:10	13:43	20:56
			2.3	0.4	2.7	0.0
	S	30	2:14	9:11	14:37	21:45
			2.3	0.4	2.5	0.1
DECEMBER.						
☾	S	1	3:10	10:17	15:31	22:30
			2.4	0.3	2.3	0.2
E	M	2	4:10	11:20	16:27	23:20
			2.5	0.3	2.2	0.2
	Tu	3	5:08	12:21	17:22	. . .
			2.6	0.3	2.0	. . .
	W	4	0:12	6:08	13:20	18:16
			0.2	2.7	0.2	2.0
	Th	5	1:08	6:57	14:16	19:09
			0.3	2.8	0.1	1.9
	F	6	1:55	7:46	15:08	19:57
			0.3	2.8	0.0	1.9
	S	7	2:47	8:33	15:57	20:45
			0.4	2.9	0.0	1.9
●	S	8	3:37	9:17	16:43	21:33
			0.5	2.9	0.0	1.9
S	M	9	4:37	10:00	17:27	22:21
			0.5	2.9	0.0	2.0
	Tu	10	5:14	10:43	18:10	23:10
			0.5	2.8	0.0	2.0
	W	11	6:00	11:25	18:53	23:55
			0.5	2.8	0.0	2.1
	Th	12	6:47	12:10	19:35	. . .
			0.6	2.7	0.1	. . .
	F	13	0:43	7:32	12:53	20:15
			2.1	0.6	2.6	0.1
A	S	14	1:30	8:20	13:39	20:55
			2.1	0.6	2.4	0.2
	S	15	2:20	9:05	14:26	21:31
			2.2	0.6	2.3	0.2
☽	M	16	3:10	9:59	15:18	22:05
			2.3	0.6	2.2	0.3
E	Tu	17	4:00	10:52	16:10	22:37
			2.5	0.5	2.1	0.3
	W	18	4:51	11:50	17:03	23:10
			2.6	0.4	2.0	0.3
	Th	19	5:43	12:50	17:57	23:53
			2.7	0.3	1.9	0.3
	F	20	6:35	13:48	18:50	. . .
			2.9	0.2	1.9	. . .
	S	21	0:35	7:26	14:45	19:43
			0.3	3.0	0.1	1.9
	S	22	1:27	8:18	15:40	20:36
			0.3	3.1	0.0	2.0
N ○	M	23	2:27	9:10	16:32	21:27
			0.3	3.1	—0.1	2.0
	Tu	24	3:43	10:00	17:22	22:20
			0.3	3.1	—0.1	2.1
P	W	25	4:52	10:51	18:10	23:13
			0.3	3.1	—0.1	2.3
	Th	26	6:00	11:42	18:57	. . .
			0.2	3.0	—0.1	. . .
	F	27	0:07	7:08	12:32	19:45
			2.3	0.3	2.8	—0.1
	S	28	1:02	8:03	13:23	20:30
			2.4	0.3	2.6	0.0
	S	29	1:57	9:02	14:26	21:18
			2.5	0.2	2.4	0.0
E ☾	M	30	2:53	10:02	15:09	22:06
			2.6	0.3	2.2	0.1
	Tu	31	3:50	11:00	16:00	22:55
			2.7	0.2	2.1	0.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.								FEBRUARY.								MARCH.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	4:36	11:22	16:56	23:20		P	Th	1	0:00	6:16	12:56	18:41		P	F	1	6:00	12:38	18:29	. . .	
			5.7	0.2	4.5	—0.2					—0.4	6.0	—0.1	4.7					5.7	—0.1	4.9	. . .	
	Tu	2	5:34	12:19	17:55	. . .		○	F	2	0:59	7:10	13:48	19:37			S	2	0:47	6:55	13:27	19:22	
			6.0	0.0	4.6	. . .					—0.7	6.2	—0.4	5.0					—0.6	5.9	—0.4	5.3	
N	W	3	0:16	6:30	13:15	18:54			S	3	1:53	8:02	14:37	20:28		○	S	3	1:40	7:45	14:18	20:12	
			—0.4	6.2	—0.2	4.7					—0.8	6.2	—0.6	5.2					—0.8	5.9	—0.6	5.5	
○ P	Th	4	1:10	7:25	14:07	19:48			S	4	2:46	8:52	15:24	21:20		E	M	4	2:31	8:33	14:57	20:58	
			—0.6	6.4	—0.4	4.8					—0.8	6.2	—0.7	5.4					—0.8	5.8	—0.7	5.7	
	F	5	2:05	8:18	14:58	20:43			M	5	3:39	9:42	16:11	22:10			Tu	5	3:20	9:21	15:41	21:43	
			—0.7	6.4	—0.5	4.9					—0.7	5.9	—0.6	5.4					—0.7	5.6	—0.6	5.6	
	S	6	2:58	9:10	15:48	21:37		E	Tu	6	4:30	10:30	16:57	22:59			W	6	4:08	10:05	16:25	22:28	
			—0.7	6.3	—0.5	5.0					—0.5	5.6	—0.5	5.3					—0.4	5.3	—0.5	5.5	
	S	7	3:53	10:01	16:38	22:32			W	7	5:23	11:20	17:45	23:48			Th	7	4:58	10:48	17:10	23:15	
			—0.6	6.0	—0.5	5.0					—0.1	5.2	—0.3	5.1					—0.1	4.9	—0.2	5.3	
	M	8	4:49	10:52	17:28	23:27			Th	8	6:17	12:06	18:35	. . .			F	8	5:47	11:32	17:57	. . .	
			—0.4	5.7	—0.4	5.0					0.2	4.7	0.0	. . .					0.3	4.5	0.1	. . .	
E	Tu	9	5:45	11:45	18:20	. . .		☾	F	9	0:41	7:15	13:00	19:27			S	9	0:08	6:41	12:19	18:48	
			—0.1	5.3	0.2	. . .					5.0	0.6	4.3	0.2					5.0	0.7	4.1	0.4	
	W	10	0:22	6:45	12:41	19:12			S	10	1:38	8:17	13:47	20:22		☾	S	10	0:56	7:39	13:11	19:42	
			4.9	0.2	4.9	0.0					4.8	0.9	4.0	0.4					4.7	1.0	3.8	0.7	
☾	Th	11	1:18	7:48	13:41	20:06			S	11	2:38	9:21	15:00	21:21		S	M	11	1:52	8:40	14:13	20:40	
			4.8	0.5	4.5	0.1					4.6	1.1	3.7	0.4					4.6	1.2	3.6	0.7	
	F	12	2:19	8:52	14:40	21:01			M	12	3:37	10:24	16:06	22:16		A	Tu	12	2:50	9:40	15:20	21:38	
			4.8	0.7	4.2	0.1					4.6	1.1	3.7	0.4					4.5	1.2	3.6	0.8	
	S	13	3:20	9:57	15:42	21:55		S	Tu	13	4:33	11:19	17:05	23:08			W	13	3:47	10:35	16:20	22:33	
			4.8	0.8	4.0	0.1					4.7	1.0	3.7	0.4					4.5	1.1	3.7	0.7	
	S	14	4:17	10:57	16:42	22:50		A	W	14	5:22	12:06	17:54	23:56			Th	14	4:40	11:23	17:12	23:25	
			4.8	0.9	3.9	0.1					4.8	0.9	3.9	0.3					4.6	0.9	3.9	0.5	
	M	15	5:09	11:50	17:37	23:38			Th	15	6:07	12:47	18:33	. . .			F	15	5:27	12:04	17:55	. . .	
			4.9	0.8	3.9	0.1					5.0	0.7	4.0	. . .					4.8	0.6	4.2	. . .	
	Tu	16	5:55	12:37	18:22	. . .			F	16	0:40	6:46	13:25	19:09			S	16	0:10	6:10	12:43	18:33	
			5.1	0.7	3.9	. . .					0.2	5.1	0.4	4:3					0.3	5.0	0.3	4.6	
S A	W	17	0:23	6:37	13:18	19:03			S	17	1:21	7:24	13:58	19:43			S	17	0:53	6:51	13:20	19:11	
			0.1	5.2	0.6	4.0					0.1	5.2	0.2	4.5					0.1	5.1	0.1	4.9	
	Th	18	1:07	7:15	13:55	19:38		●	S	18	2:00	8:00	14:33	20:15		●	M	18	1:34	7:32	13:58	19:48	
			0.1	5.3	0.5	4.1					0.1	5.3	0.1	4.7					—0.1	5.2	0.0	5.2	
●	F	19	1:47	7:52	14:30	20:10			M	19	2:38	8:36	15:07	20:50		E	Tu	19	2:15	8:10	14:34	20:26	
			0.1	5.3	0.4	4.2					0.0	5.3	0.1	4.9					—0.2	5.3	—0.1	5.4	
	S	20	2:24	8:25	15:05	20:41		E	Tu	20	3:15	9:12	15:40	21:28			W	20	2:55	8:48	15:10	21:08	
			0.2	5.3	0.3	4.3					0.1	5.3	0.1	5.1					—0.2	5.2	—0.1	5.5	
	S	21	3:00	9:00	15:38	21:13			W	21	3:53	9:48	16:15	22:07			Th	21	3:37	9:26	15:46	21:45	
			0.3	5.3	0.2	4.4					0.1	5.2	0.1	5.3					—0.1	5.1	0.0	5.6	
	M	22	3:35	9:35	16:13	21:50			Th	22	4:35	10:27	16:52	22:52			F	22	4:22	10:05	16:25	22:31	
			0.4	5.2	0.2	4.6					0.2	5.0	0.2	5.3					0.0	4.9	0.1	5.6	
	Tu	23	4:10	10:10	16:45	22:29			F	23	5:22	11:07	17:38	23:40			S	23	5:10	10:47	17:10	23:22	
			0.5	5.1	0.3	4.8					0.4	4.8	0.3	5.3					0.2	4.6	0.3	5.5	
E	W	24	4:51	10:50	17:22	23:14			S	24	6:17	11:53	18:23	. . .			S	24	6:05	11:37	18:03	. . .	
			0.5	5.0	0.3	4.9					0.5	4.5	0.4	. . .					0.4	4.4	0.5	. . .	
	Th	25	5:38	11:33	18:05	. . .		☽	S	25	0:36	7:18	12:47	19:22		N ☽	M	25	0:20	7:07	12:35	19:07	
			0.6	4.8	0.4	. . .					5.2	0.7	4.2	0.5					5.3	0.6	4.1	0.6	
	F	26	0:03	6:31	12:20	18:53			M	26	1:40	8:28	13:58	20:30			Tu	26	1:22	8:16	13:48	20:18	
			5.0	0.7	4.6	0.4					5.2	0.8	4.0	0.5					5.1	0.7	4.0	0.5	
☽	S	27	1:01	7:35	13:13	19:48		N	Tu	27	2:47	9:40	15:10	21:40			W	27	2:32	9:23	15:06	21:30	
			5.1	0.7	4.4	0.4					5.2	0.7	4.0	0.3					5.1	0.6	4.1	0.3	
	S	28	2:02	8:47	14:15	20:52			W	28	3:56	10:45	16:24	22:48		P	Th	28	3:41	10:27	16:18	22:37	
			5.2	0.7	4.2	0.3					5.3	0.5	4.2	0.0					5.1	0.4	4.4	0.1	
	M	29	3:08	9:57	15:24	21:57			Th	29	5:00	11:45	17:31	23:50			F	29	4:45	11:23	17:20	23:38	
			5.3	0.6	4.1	0.2					5.5	0.2	4.5	—0.3					5.2	0.1	4.7	—0.2	
	Tu	30	4:14	11:02	16:35	23:00											S	30	5:43	12:13	18:15	. . .	
			5.5	0.4	4.2	—0.1													5.4	—0.2	5.2	. . .	
N	W	31	5:16	12:02	17:41	. . .											S	31	0:33	6:38	13:00	19:02	
			5.8	0.2	4.4	. . .													—0.4	5.5	—0.4	5.5	

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	1:25 −0.6	7:28 5.5	13:46 −0.6	19:48 5.7
	Tu	2	2:15 −0.6	8:13 5.4	14:29 −0.6	20:32 5.8
	W	3	3:00 −0.4	8:56 5.2	15:12 −0.5	21:15 5.7
	Th	4	3:47 −0.2	9:37 4.9	15:54 −0.3	22:00 5.6
	F	5	4:33 0.1	10:17 4.6	16:37 0.0	22:43 5.3
	S	6	5:18 0.4	10:55 4.2	17:20 0.3	23:27 5.0
	S	7	6:08 0.7	11:40 4.0	18:08 0.7	. . . . .
S	M	8	0:14 4.7	7:00 1.0	12:28 3.7	19:01 0.9
☾ A	Tu	9	1:04 4.5	7:55 1.1	13:26 3.6	19:58 1.0
	W	10	1:58 4.4	8:50 1.1	14:29 3.7	20:57 1.0
	Th	11	2:54 4.4	9:48 1.0	15:30 3.8	21:53 0.9
	F	12	3:48 4.4	10:32 0.8	16:24 4.1	22:46 0.6
	S	13	4:41 4.6	11:17 0.5	17:10 4.5	23:36 0.4
	S	14	5:30 4.8	12:00 0.2	17:54 4.9	. . . . .
E	M	15	0:22 0.1	6:17 5.0	12:40 0.0	18:35 5.3
	Tu	16	1:07 −0.1	7:00 5.1	13:20 −0.1	19:15 5.6
●	W	17	1:51 −0.2	7:40 5.1	14:00 −0.2	19:57 5.8
	Th	18	2:37 −0.3	8:21 5.0	14:39 −0.2	20:42 5.9
	F	19	3:22 −0.3	9:08 4.9	15:23 −0.1	21:28 5.9
	S	20	4:10 −0.1	9:47 4.7	16:05 0.0	22:18 5.8
	S	21	5:02 0.1	10:35 4.5	16:55 0.2	22:10 5.6
N P	M	22	5:58 0.3	11:30 4.3	17:58 0.4	. . . . .
	Tu	23	0:08 5.4	7:00 0.5	12:35 4.1	18:59 0.5
☽	W	24	1:11 5.1	8:02 0.5	13:47 4.1	20:10 0.5
	Th	25	2:17 5.0	9:05 0.4	15:00 4.3	21:20 0.3
	F	26	3:24 4.9	10:14 0.2	16:05 4.6	22:25 0.2
	S	27	4:27 4.9	10:57 0.0	17:00 5.0	23:25 0.0
E	S	28	5:27 5.0	11:47 −0.2	17:52 5.3	. . . . .
	M	29	0:19 −0.2	6:20 5.1	12:34 −0.4	18:40 5.6
	Th	30	1:10 −0.3	7:07 5.0	13:18 −0.5	19:25 5.7

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:58 −0.2	7:50 4.9	14:01 −0.5	20:09 5.8
	Th	2	2:44 −0.1	8:30 4.7	14:44 −0.3	20:51 5.7
	F	3	3:28 0.1	9:10 4.5	15:25 −0.1	21:32 5.5
	S	4	4:10 0.3	9:48 4.3	16:07 0.2	22:13 5.3
S	S	5	4:53 0.5	10:25 4.1	16:49 0.5	22:54 5.0
	M	6	5:37 0.7	11:05 3.9	17:32 0.8	23:35 4.8
A	Tu	7	6:23 0.8	11:50 3.8	18:18 1.0	. . . . .
	W	8	0:19 4.6	7:10 0.9	12:43 3.8	19:12 1.1
☾	Th	9	1:07 4.5	8:00 0.9	13:40 3.9	20:10 1.1
	F	10	2:00 4.4	8:50 0.8	14:37 4.1	21:07 1.0
	S	11	2:55 4.4	9:40 0.6	15:31 4.4	22:08 0.7
E	S	12	3:53 4.5	10:27 0.4	16:22 4.8	22:57 0.5
	M	13	4:45 4.7	11:18 0.2	17:10 5.2	23:48 0.2
	Tu	14	5:35 4.7	11:59 0.0	17:58 5.6	. . . . .
	W	15	0:48 −0.1	6:23 4.8	12:43 −0.2	18:47 5.9
●	Th	16	1:28 −0.3	7:10 4.8	13:29 −0.3	19:35 6.1
	F	17	2:18 −0.3	7:57 4.8	14:14 −0.3	20:24 6.2
	S	18	3:08 −0.3	8:44 4.7	15:02 −0.2	21:15 6.1
N P	S	19	3:59 −0.2	9:35 4.6	15:58 −0.1	22:07 6.0
	M	20	4:51 −0.1	10:28 4.5	16:47 0.1	23:00 5.7
	Tu	21	5:47 0.1	11:28 4.4	17:47 0.2	23:57 5.4
	W	22	6:44 0.2	12:32 4.4	18:52 0.3	. . . . .
☽	Th	23	0:58 5.1	7:42 0.2	13:40 4.4	20:00 0.4
	F	24	2:00 4.9	8:40 0.2	14:43 4.6	21:07 0.4
E	S	25	3:05 4.8	9:35 0.1	15:42 4.8	22:11 0.3
	S	26	4:10 4.7	10:28 −0.1	16:39 5.1	23:10 0.2
	M	27	5:07 4.6	11:18 −0.2	17:31 5.3	. . . . .
	Tu	28	0:04 0.2	5:58 4.6	12:06 −0.3	18:20 5.5
	W	29	0:55 0.1	6:48 4.5	12:52 −0.4	19:05 5.6
○	Th	30	1:42 0.2	7:28 4.4	13:35 −0.3	19:48 5.6
	F	31	2:26 0.2	8:08 4.3	14:20 −0.1	20:28 5.5

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	3:08 0.3	8:47 4.2	15:00 0.1	21:07 5.4
	S	2	3:48 0.4	9:22 4.1	15:40 0.3	21:47 5.2
	M	3	4:28 0.5	9:58 4.0	16:18 0.6	22:22 5.0
A	Tu	4	5:07 0.6	10:35 3.9	16:58 0.8	22:58 4.9
	W	5	5:46 0.7	11:16 4.0	17:39 1.0	23:39 4.7
	Th	6	6:27 0.7	12:02 4.1	18:27 1.0	. . . . .
☾	F	7	0:23 4.6	7:10 0.7	12:54 4.2	19:20 1.0
	S	8	1:10 4.5	7:55 0.6	13:48 4.5	20:18 0.9
E	S	9	2:05 4.5	8:47 0.5	14:43 4.7	21:20 0.7
	M	10	3:02 4.5	9:37 0.3	15:40 5.1	22:20 0.5
	Tu	11	3:59 4.5	10:29 0.1	16:35 5.4	23:17 0.3
	W	12	4:54 4.5	11:20 −0.1	17:30 5.8	. . . . .
	Th	13	0:12 0.0	5:48 4.6	12:12 −0.2	18:23 6.0
	F	14	1:06 −0.1	6:42 4.7	13:02 −0.4	19:15 6.2
● N	S	15	2:00 −0.3	7:36 4.7	13:54 −0.4	20:08 6.3
P	S	16	2:52 −0.3	8:29 4.7	14:46 −0.4	21:00 6.2
	M	17	3:44 −0.3	9:24 4.7	15:41 −0.3	21:53 6.1
	Tu	18	4:35 −0.3	10:20 4.7	16:38 −0.2	22:47 5.8
	W	19	5:27 −0.2	11:18 4.7	17:39 0.0	23:41 5.5
	Th	20	6:21 −0.1	12:20 4.7	18:40 0.1	. . . . .
☽ E	F	21	0:38 5.1	7:15 0.0	13:19 4.7	19:42 0.3
	S	22	1:40 4.8	8:10 0.0	14:18 4.8	20:47 0.4
	S	23	2:43 4.6	9:05 0.0	15:19 4.9	21:51 0.5
	M	24	3:43 4.4	9:58 −0.1	16:17 5.1	22:52 0.5
	Tu	25	4:41 4.3	10:50 −0.1	17:10 5.2	23:49 0.5
	W	26	5:35 4.2	11:40 −0.2	17:59 5.3	. . . . .
	Th	27	0:39 0.5	6:25 4.1	12:28 −0.2	18:45 5.4
S	F	28	1:25 0.5	7:10 4.1	13:13 −0.1	19:27 5.4
○	S	29	2:07 0.5	7:50 4.1	13:57 0.0	20:05 5.4
	S	30	2:46 0.5	8:26 4.0	14:36 0.2	20:43 5.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.							AUGUST.							SEPTEMBER.						
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	3:23	8:58	15:15	21:18		Th	1	4:00	9:37	16:00	21:56		S	1	4:27	10:27	16:57	22:41
			0.5	4.0	0.4	5.2				0.3	4.5	0.5	5.0				0.3	5.2	0.4	4.7
	Tu	2	3:58	9:30	15:52	21:51	E	F	2	4:30	10:04	16:37	22:34		M	2	5:07	11:12	17:47	23:25
			0.5	4.1	0.6	5.1				0.4	4.7	0.6	4.9				0.4	5.2	0.6	4.5
	W	3	4:34	10:05	16:37	22:25		S	3	5:04	10:56	17:18	23:11		Tu	3	5:58	12:06	18:46	. . .
			0.5	4.2	0.7	4.9				0.4	4.8	0.7	4.8				0.5	5.2	0.7	. . .
	Th	4	5:10	10:43	17:05	23:02		S	4	5:43	11:41	18:07	23:54	☾	W	4	0:15	6:48	13:05	19:53
			0.5	4.3	0.8	4.8				0.5	5.0	0.7	4.6				4.3	0.6	5.1	0.8
	F	5	5:45	11:27	17:48	23:43	☾	M	5	6:27	12:32	19:06	. . .	N	Th	5	1:17	7:54	14:12	21:04
			0.5	4.4	0.9	4.7				0.5	5.1	0.8	. . .				4.1	0.6	5.1	0.8
E	S	6	6:25	12:14	18:38	. . .		Tu	6	0:42	7:18	13:31	20:10		F	6	2:30	9:05	15:20	22:10
			0.6	4.6	0.9	. . .				4.4	0.5	5.1	0.8				4.0	0.4	5.2	0.6
☾	S	7	0:30	7:10	13:07	19:35		W	7	1:40	8:18	14:35	21:20		S	7	3:47	10:14	16:25	23:10
			4.6	0.5	4.8	0.8				4.3	0.5	5.2	0.7				4.2	0.1	5.4	0.3
	M	8	1:20	8:00	14:04	20:40		Th	8	2:47	9:22	15:40	22:28		S	8	4:55	11:18	17:27	. . .
			4.5	0.4	5.0	0.7				4.2	0.3	5.4	0.5				4.5	−0.2	5.6	. . .
	Tu	9	2:16	8:53	15:03	21:46	N	F	9	3:57	10:28	16:42	23:30	P	M	9	0:05	5:55	12:17	18:22
			4.4	0.3	5.2	0.6				4.2	0.0	5.6	0.3				−0.1	4.9	−0.5	5.8
	W	10	3:17	9:51	16:04	22:50		S	10	5:05	11:30	17:43	. . .	●	Tu	10	0:55	6:50	13:12	19:15
			4.3	0.2	5.5	0.4				4.4	−0.2	5.9	. . .				−0.3	5.3	−0.7	5.8
	Th	11	4:19	10:48	17:04	23:50		S	11	0:27	6:08	12:28	18:40	E	W	11	1:43	7:41	14:03	20:05
			4.3	0.0	5.8	0.2				0.0	4.7	−0.5	6.0				−0.6	5.6	−0.8	5.8
	F	12	5:22	11:47	18:01	. . .	P	M	12	1:19	7:05	13:25	19:34		Th	12	2:28	8:28	14:55	20:55
			4.4	−0.2	6.0	. . .	●			−0.4	5.0	−0.7	6.1				−0.7	5.8	−0.7	5.6
N	S	13	0:46	6:28	12:42	18:57		Tu	13	2:08	8:00	14:19	20:25		F	13	3:15	9:15	15:45	21:41
			0.0	4.6	−0.4	6.2				−0.5	5.2	−0.8	6.1				−0.7	5.8	−0.5	5.8
●	S	14	1:40	7:20	13:40	19:51		W	14	2:57	8:50	15:12	21:15		S	14	4:00	10:18	16:37	22:27
P			−0.2	4.7	−0.6	6.3				−0.6	5.4	−0.7	5.9				−0.5	5.7	−0.2	5.0
	M	15	2:31	8:15	14:33	20:44	E	Th	15	3:44	9:43	16:05	22:06		S	15	4:47	10:53	17:30	23:13
			−0.4	4.9	−0.6	6.2				−0.6	5.5	−0.6	5.7				−0.3	5.5	0.2	4.6
	Tu	16	3:22	9:10	15:28	21:35		F	16	4:32	10:32	16:58	22:57		M	16	5:35	11:45	18:24	. . .
			−0.5	5.0	−0.6	6.1				−0.5	5.5	−0.3	5.8				0.0	5.2	0.5	. . .
	W	17	4:11	10:05	16:24	22:28		S	17	5:20	11:23	17:55	23:47		Tu	17	0:05	6:28	12:40	19:24
			−0.5	5.1	−0.4	5.8				−0.3	5.3	0.1	4.8				4.2	0.3	4.9	0.8
	Th	18	5:01	11:00	17:20	23:20		S	18	6:10	12:17	18:53	. . .	☽	W	18	1:00	7:26	13:38	20:25
			−0.4	5.1	−0.2	5.4				−0.1	5.1	0.4	. . .	S			3.8	0.5	4.6	1.0
E	F	19	5:52	11:55	18:18	. . .	☽	M	19	0:40	7:03	13:16	19:55		Th	19	2:07	8:25	14:38	21:26
			−0.3	5.1	0.1	. . .				4.4	0.1	4.9	0.7				3.7	0.7	4.5	1.1
	S	20	0:16	6:44	12:49	19:20		Tu	20	1:37	8:00	14:17	21:00		F	20	3:16	9:25	15:37	22:21
			5.1	−0.2	5.0	0.3				4.1	0.3	4.8	0.9				3.6	0.7	4.5	1.0
☽	S	21	1:13	7:38	13:50	20:22		W	21	2:42	8:58	15:18	22:04	A	S	21	4:16	10:21	16:28	23:05
			4.6	0.0	4.9	0.6				3.8	0.4	4.7	1.0				3.8	0.6	4.6	0.8
	M	22	2:12	8:33	14:50	21:28	S	Th	22	3:49	9:56	16:16	23:01		S	22	5:05	11:12	17:15	23:51
			4.3	0.0	4.9	0.7				3.7	0.3	4.7	1.0				4.0	0.5	4.7	0.6
	Tu	23	3:14	9:28	15:50	22:31		F	23	4:50	10:50	17:08	23:50		M	23	5:45	11:58	17:57	. . .
			4.1	0.1	4.9	0.8				3.8	0.4	4.8	0.8				4.3	0.3	4.8	. . .
	W	24	4:16	10:23	16:45	23:29		S	24	5:40	11:42	17:52	. . .		Tu	24	0:29	6:22	12:40	18:37
			4.0	0.1	5.0	0.9				3.9	0.3	4.9	. . .				0.4	4.5	0.2	5.0
	Th	25	5:12	11:15	17:36	. . .	A	S	25	0:31	6:22	12:27	18:34		W	25	1:05	6:57	13:20	19:15
			3.9	0.1	5.1	. . .				0.6	4.1	0.2	5.0				0.2	4.8	0.1	5.1
S	F	26	0:20	6:05	12:05	18:21		M	26	1:09	6:58	13:08	19:10	E	Th	26	1:40	7:32	13:58	19:52
			0.8	4.0	0.1	5.1				0.5	4.3	0.1	5.1	○			0.1	5.1	0.0	5.1
	S	27	1:03	6:50	12:50	19:02	○	Tu	27	1:43	7:32	13:48	19:45		F	27	2:14	8:06	14:36	20:26
			0.6	4.0	0.1	5.2				0.3	4.5	0.1	5.2				0.0	5.3	0.0	5.1
○	S	28	1:42	7:28	13:33	19:40		W	28	2:17	8:03	14:25	20:21		S	28	2:47	8:42	15:15	21:00
A			0.5	4.1	0.1	5.2				0.2	4.6	0.1	5.2				0.0	5.5	0.0	4.9
	M	29	2:18	8:01	14:13	20:15	E	Th	29	2:52	8:35	15:00	20:55		S	29	3:22	9:20	15:57	21:38
			0.4	4.2	0.2	5.2				0.2	4.8	0.2	5.1				0.1	5.5	0.1	4.7
	Tu	30	2:52	8:32	14:50	20:48		F	30	3:22	9:40	15:35	21:28		M	30	3:58	10:04	16:43	22:18
			0.4	4.3	0.3	5.2				0.2	5.0	0.2	5.0				0.3	5.5	0.2	4.6
	W	31	3:26	9:05	15:25	21:22		S	31	3:54	9:47	16:13	22:03							
			0.3	4.4	0.4	5.1				0.2	5.1	0.3	4.9							

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	OCTOBER. Time and Height of High and Low Water.			
	Tu	1	4:38 0.4	10:52 5.4	17:35 0.4	23:04 4.8
	W	2	5:28 0.6	11:48 5.3	18:34 0.6	. . . . .
N ☾	Th	3	0:00 4.1	6:30 0.7	12:48 5.1	19:40 0.7
	F	4	1:09 4.0	7:41 0.7	13:55 5.0	20:48 0.7
	S	5	2:26 4.1	8:55 0.5	15:03 5.0	21:52 0.5
	S	6	3:50 4.3	10:05 0.2	16:10 5.1	22:50 0.2
P	M	7	4:45 4.7	11:07 −0.1	17:10 5.3	23:42 −0.1
	Tu	8	5:1⁵ 5.2	12:05 −0.4	18:06 5.4	. . . . .
E	W	9	0:30 −0.4	6:30 5.6	12:57 −0.5	18:59 5.5
●	Th	10	1:17 −0.6	7:18 5.8	13:48 −0.6	19:45 5.4
	F	11	2:00 −0.7	8:05 6.0	14:37 −0.6	20:30 5.2
	S	12	2:45 −0.6	8:52 5.9	15:25 −0.3	21:13 5.0
	S	13	3:30 −0.4	9:38 5.8	16:13 0.0	21:58 4.6
	M	14	4:16 −0.2	10:25 5.5	17:02 0.3	22:42 4.3
	Tu	15	5:02 0.2	11:12 5.2	17:54 0.6	23:29 4.0
S	W	16	5:53 0.5	12:01 4.9	18:47 0.9	. . . . .
☽	Th	17	0:22 3.8	6:48 0.8	12:55 4.6	19:43 1.0
	F	18	1:25 3.7	7:47 0.9	13:50 4.4	20:38 1.0
A	S	19	2:28 3.7	8:47 1.0	14:45 4.3	21:32 0.9
	S	20	3:27 3.8	9:43 0.9	15:39 4.4	22:20 0.8
	M	21	4:17 4.1	10:35 0.7	16:30 4.5	23:02 0.5
	Tu	22	4:59 4.5	11:22 0.5	17:17 4.6	23:43 0.3
E	W	23	5:39 4.8	12:07 0.3	18:00 4.8	. . . . .
	Th	24	0:22 0.1	6:18 5.2	12:50 0.1	18:40 4.9
○	F	25	1:00 −0.1	6:56 5.5	13:32 −0.1	19:18 4.9
	S	26	1:38 −0.1	7:37 5.7	14:14 −0.2	19:57 4.9
	S	27	2:15 −0.1	8:18 5.9	14:58 −0.2	20:35 4.8
	M	28	2:54 0.0	9:02 5.9	15:44 −0.1	21:17 4.6
	Tu	29	3:37 0.1	9:50 5.8	16:32 0.1	22:03 4.5
N	W	30	4:33 0.3	10:40 5.6	17:25 0.3	22:55 4.3
	Th	31	5:18 0.5	11:35 5.4	18:25 0.5	23:57 4.2

Moon.	Day of— W.	Mo	NOVEMBER. Time and Height of High and Low Water.			
☾	F	1	6:23 0.6	12:35 5.1	19:27 0.5	. . . . .
	S	2	1:57 4.1	7:34 0.6	13:40 4.9	20:29 0.4
P	S	3	2:20 4.8	8:46 0.5	14:47 4.8	21:30 0.3
	M	4	3:28 4.6	9:54 0.3	15:52 4.9	22:25 0.1
E	Tu	5	4:27 5.0	10:56 0.1	16:55 5.0	23:16 −0.2
	W	6	5:21 5.3	11:52 −0.1	17:50 5.0	. . . . .
	Th	7	0:04 −0.4	6:12 5.7	12:44 −0.3	18:38 5.0
●	F	8	0:50 −0.6	7:00 5.9	13:34 −0.3	19:25 4.9
	S	9	1:35 −0.6	7:46 6.0	14:20 −0.2	20:08 4.7
	S	10	2:20 −0.5	8:30 5.9	15:07 −0.1	20:50 4.6
	M	11	3:04 −0.3	9:13 5.7	15:53 0.2	21:31 4.3
S	Tu	12	3:48 0.0	9:57 5.5	16:37 0.4	22:12 4.1
	W	13	4:32 0.3	10:40 5.2	17:24 0.6	22:56 3.9
	Th	14	5:18 0.7	11:24 4.9	18:10 0.8	23:43 3.8
	F	15	6:08 0.9	12:08 4.6	18:59 0.9	. . . . .
A ☽	S	16	0:36 3.8	7:08 1.1	12:56 4.4	19:48 0.9
	S	17	1:33 3.8	8:00 1.1	13:47 4.3	20:37 0.8
	M	18	2:28 4.0	8:55 1.1	14:42 4.3	21:26 0.7
E	Tu	19	3:18 4.3	9:50 0.9	15:37 4.3	22:12 0.5
	W	20	4:07 4.6	10:42 0.7	16:25 4.4	22:57 0.3
	Th	21	4:55 5.0	11:31 0.4	17:15 4.6	23:40 0.1
	F	22	5:41 5.4	12:20 0.1	18:01 4.7	. . . . .
	S	23	0:28 −0.1	6:27 5.7	13:07 −0.1	18:46 4.7
○	S	24	1:07 −0.2	7:13 6.0	13:54 −0.2	19:32 4.7
	M	25	1:50 −0.2	8:00 6.1	14:42 −0.2	20:17 4.7
N	Tu	26	2:36 −0.2	8:48 6.1	15:31 −0.2	21:05 4.6
	W	27	3:24 −0.2	9:38 6.0	16:22 −0.1	21:55 4.5
P	Th	28	4:16 0.1	10:30 5.8	17:14 0.0	22:51 4.4
	F	29	5:13 0.2	11:24 5.5	18:07 0.2	23:53 4.4
	S	30	6:16 0.4	12:20 5.2	19:07 0.2	. . . . .

Moon.	Day of— W.	Mo.	DECEMBER Time and Height of High and Low Water.			
☾	S	1	1:00 4.4	7:24 0.4	13:22 4.9	20:05 0.2
E	M	2	2:05 4.6	8:32 0.5	14:28 4.7	21:02 0.1
	Tu	3	3:08 4.8	9:28 0.4	15:35 4.6	21:57 0.0
	W	4	4:08 5.1	10:41 0.3	16:36 4.6	22:50 −0.2
	Th	5	5:03 5.3	11:40 0.2	17:30 4.5	23:39 −0.4
	F	6	5:55 5.6	12:33 0.1	18:20 4.5	. . . . .
	S	7	0:28 −0.4	6:43 5.7	13:22 0.1	19:07 4.5
●	S	8	1:14 −0.4	7:28 5.8	14:08 0.2	19:50 4.4
S	M	9	1:59 −0.3	8:12 5.7	14:50 0.2	20:32 4.3
	Tu	10	2:42 −0.2	8:52 5.6	15:32 0.3	21:10 4.2
	W	11	3:25 0.1	9:32 5.4	16:13 0.4	21:48 4.1
	Th	12	4:07 0.4	10:10 5.2	16:52 0.5	22:26 4.0
	F	13	4:47 0.7	10:47 4.9	17:33 0.6	23:06 4.0
A	S	14	5:28 0.9	11:26 4.7	18:14 0.7	23:50 4.0
	S	15	6:14 1.1	12:06 4.5	18:56 0.8	. . . . .
☽	M	16	0:39 4.1	7:08 1.1	12:51 4.4	19:40 0.7
E	Tu	17	1:29 4.3	7:59 1.1	13:44 4.3	20:28 0.6
	W	18	2:23 4.5	9:00 1.0	14:38 4.3	21:17 0.5
	Th	19	3:19 4.9	9:59 0.8	15:34 4.3	22:08 0.3
	F	20	4:15 5.2	10:56 0.5	16:30 4.3	23:00 0.1
	S	21	5:08 5.5	11:51 0.3	17:25 4.4	23:50 −0.1
	S	22	6:00 5.8	12:44 0.0	18:20 4.5	. . . . .
N ○	M	23	0:41 −0.3	6:52 6.1	13:35 −0.2	19:11 4.6
	Tu	24	1:30 −0.4	7:43 6.2	14:26 −0.3	20:02 4.7
P	W	25	2:22 −0.4	8:34 6.2	15:15 −0.3	20:55 4.8
	Th	26	3:13 −0.4	9:25 6.1	16:05 −0.3	21:47 4.8
	F	27	4:07 −0.3	10:16 5.9	16:55 −0.3	22:43 4.8
	S	28	5:03 −0.1	11:10 5.6	17:47 −0.2	23:42 4.8
	S	29	6:04 0.1	12:08 5.2	18:41 0.0	. . . . .
E ☾	M	30	0:41 4.8	7:08 0.3	13:03 4.9	19:36 0.0
	Tu	31	1:40 4.8	8:18 0.5	14:06 4.6	20:32 0.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:30 7.8	10:00 0.2	15:54 6.1	22:06 —0.2
	Tu	2	4:25 7.7	11:00 —0.1	16:50 6.3	23:01 —0.5
N	W	3	5:20 8.0	11:50 —0.4	17:45 6.6	23:56 —0.8
○ P	Th	4	6:14 8.2	12:44 —0.7	18:40 6.8	. . . . .
	F	5	0:50 —0.9	7:06 8.3	13:34 —0.8	19:33 7.0
	S	6	1:42 —0.9	8:00 8.2	14:25 —0.8	20:26 7.0
	S	7	2:36 —0.8	8:50 8.0	15:15 —0.8	21:20 7.0
	M	8	3:30 —0.6	9:42 7.6	16:06 —0.6	22:15 7.0
E	Tu	9	4:30 —0.2	10:38 7.1	16:57 —0.4	23:10 6.8
	W	10	5:27 0.1	11:35 6.7	17:50 —0.1	. . . . .
☾	Th	11	0:04 6.7	6:30 0.4	12:30 6.2	18:45 0.1
	F	12	1:02 6.6	7:30 0.7	13:30 5.9	19:40 0.2
	S	13	2:00 6.5	8:32 0.8	14:26 5.6	20:34 0.3
	S	14	2:54 6.5	9:30 0.9	15:23 5.5	21:26 0.4
	M	15	3:44 6.5	10:22 0.9	16:13 5.4	22:15 0.4
	Tu	16	4:30 6.6	11:08 0.8	17:00 5.5	23:00 0.4
S A	W	17	5:12 6.7	11:50 0.7	17:40 5.5	23:44 0.4
	Th	18	5:52 6.8	12:26 0.6	18:20 5.6	. . . . .
●	F	19	0:24 0.4	6:30 6.8	13:00 0.4	18:55 5.7
	S	20	1:01 0.4	7:08 6.9	13:36 0.3	19:30 5.9
	S	21	1:38 0.5	7:47 6.9	14:12 0.2	20:08 6.0
	M	22	2:16 0.5	8:25 6.8	14:48 0.2	20:47 6.2
	Tu	23	2:54 0.5	9:05 6.6	15:26 0.2	21:30 6.3
E	W	24	3:27 0.6	9:47 6.4	16:07 0.3	22:16 6.4
	Th	25	4:26 0.6	10:34 6.2	16:52 0.4	23:06 6.5
	F	26	5:21 0.7	11:24 6.0	17:42 0.5	. . . . .
☽	S	27	0:00 6.5	6:22 0.8	12:20 5.8	18:38 0.5
	S	28	1:00 6.6	7:30 0.8	13:20 5.6	19:40 0.5
	M	29	2:08 6.8	8:37 0.7	14:27 5.7	20:44 0.2
	Tu	30	3:07 7.1	9:42 0.4	15:34 5.9	21:46 —0.1
N	W	31	4:08 7.4	10:41 0.1	16:35 6.2	22:46 —0.5

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	5:05 7.8	11:36 —0.3	17:32 6.6	23:42 —0.8
○	F	2	6:00 8.1	12:28 —0.7	18:26 7.0	. . . . .
	S	3	0:37 —1.0	6:51 8.2	13:16 —0.9	19:18 7.3
	S	4	1:28 —1.1	7:40 8.2	14:03 —1.1	20:08 7.5
	M	5	2:20 —1.0	8:32 8.0	14:50 —1.0	21:00 7.5
E	Tu	6	3:11 —0.8	9:21 7.6	15:36 —0.8	21:48 7.4
	W	7	4:04 —0.4	10:11 7.2	16:24 —0.5	22:36 7.1
	Th	8	4:57 0.0	11:00 6.6	17:12 —0.1	23:28 6.8
☾	F	9	5:54 0.5	11:52 6.0	18:05 0.2	. . . . .
	S	10	0:28 6.5	6:54 0.9	12:48 5.6	19:00 0.6
	S	11	1:20 6.2	7:56 1.2	13:50 5.3	19:58 0.8
	M	12	2:16 6.1	8:58 1.3	14:50 5.1	20:54 0.9
S	Tu	13	3:12 6.1	9:58 1.2	15:47 5.1	21:48 0.8
A	W	14	4:00 6.2	10:40 1.1	16:35 5.3	22:36 0.7
	Th	15	4:45 6.4	11:21 0.8	17:17 5.5	23:21 0.6
	F	16	5:27 6.6	11:58 0.6	17:54 5.8	. . . . .
●	S	17	0:01 0.4	6:01 6.7	12:34 0.3	18:30 6.0
	S	18	0:39 0.3	6:45 6.9	13:08 0.1	19:06 6.3
	M	19	1:16 0.2	7:23 6.9	13:41 0.0	19:42 6.6
E	Tu	20	1:54 0.1	8:00 6.9	14:17 —0.1	20:21 6.8
	W	21	2:32 0.1	8:41 6.8	14:54 0.0	21:04 6.9
	Th	22	3:15 0.1	9:21 6.6	15:34 0.1	21:47 6.9
	F	23	4:03 0.3	10:05 6.3	16:18 0.3	22:36 6.8
	S	24	4:56 0.5	10:55 6.0	17:10 0.5	23:32 6.7
☽	S	25	6:00 0.8	11:50 5.7	18:09 0.6	. . . . .
	M	26	0:34 6.6	7:06 0.8	12:58 5.5	19:16 0.6
N	Tu	27	1:41 6.6	8:18 0.8	14:10 5.5	20:26 0.4
	W	28	2:50 6.8	9:26 0.6	15:21 5.8	21:34 0.0
	Th	29	3:52 7.2	10:26 0.1	16:24 6.3	22:34 —0.4

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:51 7.5	11:20 —0.3	17:20 6.8	23:32 —0.8
	S	2	5:42 7.8	12:08 —0.8	18:10 7.3	. . . . .
○	S	3	0:24 —1.1	6:34 8.0	12:54 —1.0	19:00 7.7
E	M	4	1:14 —1.2	7:24 8.0	13:38 —1.1	19:47 7.9
	Tu	5	2:01 —1.1	8:10 7.8	14:21 —1.1	20:32 7.8
	W	6	2:48 —0.9	8:54 7.4	15:05 —0.8	21:16 7.6
	Th	7	3:36 —0.4	9:38 6.9	15:48 —0.4	22:01 7.2
	F	8	4:26 0.1	10:25 6.4	16:36 0.0	22:51 6.8
	S	9	5:16 0.6	11:13 5.8	17:25 0.5	23:42 6.4
☾	S	10	6:13 1.0	12:08 5.3	18:20 0.9	. . . . .
S	M	11	0:37 6.0	7:14 1.3	13:08 5.0	19:20 1.2
A	Tu	12	1:35 5.8	8:16 1.5	14:14 4.9	20:20 1.3
	W	13	2:32 5.8	9:15 1.4	15:14 5.0	21:18 1.2
	Th	14	3:26 5.9	10:04 1.1	16:02 5.3	22:08 0.9
	F	15	4:13 6.1	10:45 0.8	16:45 5.7	22:53 0.7
	S	16	4:58 6.4	11:22 0.5	17:25 6.1	23:35 0.3
	S	17	5:40 6.6	11:59 0.2	18:00 6.5	. . . . .
●	M	18	0:12 0.0	6:18 6.8	12:35 —0.1	18:38 6.9
E	Tu	19	0:51 —0.2	6:57 7.0	13:10 —0.2	19:15 7.1
	W	20	1:31 —0.3	7:37 7.0	13:48 —0.3	19:55 7.3
	Th	21	2:13 —0.4	8:15 6.8	14:27 —0.2	20:37 7.4
	F	22	2:58 —0.2	8:56 6.6	15:07 0.0	21:22 7.3
	S	23	3:46 0.0	9:41 6.3	15:53 0.2	22:13 7.1
	S	24	4:41 0.4	10:32 5.9	16:47 0.5	23:11 6.8
N ☽	M	25	5:42 0.7	11:35 5.6	17:50 0.7	. . . . .
	Tu	26	0:17 6.5	6:52 0.9	12:47 5.4	19:02 0.7
	W	27	1:27 6.5	8:02 0.8	14:08 5.6	20:15 0.5
P	Th	28	2:37 6.6	9:08 0.5	15:12 6.0	21:23 0.1
	F	29	3:40 6.9	10:06 0.0	16:10 6.5	22:25 —0.3
	S	30	4:35 7.2	10:57 —0.4	17:03 7.1	23:18 —0.7
	S	31	5:22 7.5	11:45 —0.8	17:52 7.1	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15.47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	0:10 −1.0	6:16 7.6	12:28 −1.0	18:35 7.9
	Tu	2	0:55 −1.1	7:00 7.6	13:11 −1.1	19:18 8.0
	W	3	1:41 −1.0	7:42 7.3	13:52 −1.0	20:00 7.9
	Th	4	2:24 −0.7	8:23 7.0	14:34 −0.6	20:43 7.6
	F	5	3:08 −0.3	9:05 6.5	15:15 −0.2	21:28 7.2
	S	6	3:53 0.2	9:49 6.0	15:58 0.3	22:13 6.7
	S	7	4:41 0.7	10:35 5.6	16:46 0.8	23:00 6.2
S	M	8	5:33 1.1	11:28 5.2	17:38 1.2	23:53 6.1
☾ A	Tu	9	6:29 1.3	12:28 4.9	18:40 1.5	. . . . .
	W	10	0:50 5.6	7:28 1.4	13:33 4.9	19:42 1.5
	Th	11	1:39 5.5	8:25 1.3	14:33 5.1	20:41 1.3
	F	12	2:45 5.7	9:16 1.1	15:24 5.5	21:35 1.0
	S	13	3:38 5.9	10:00 0.7	16:08 5.9	22:20 0.7
	S	14	4:25 6.2	10:42 0.4	16:49 6.4	23:03 0.3
E	M	15	5:07 6.5	11:20 0.0	17:27 6.9	23:45 −0.1
	Tu	16	5:48 6.8	12:00 −0.2	18:06 7.3	. . . . .
●	W	17	0:27 −0.4	6:28 6.9	12:40 −0.4	18:48 7.6
	Th	18	1:10 −0.6	7:08 6.9	13:20 −0.4	19:30 7.8
	F	19	1:55 −0.6	7:52 6.7	14:02 −0.3	20:15 7.8
	S	20	2:42 −0.4	8:36 6.5	14:47 −0.1	21:05 7.5
N	S	21	3:33 −0.1	9:25 6.2	15:37 0.2	21:58 7.2
P	M	22	4:28 0.2	10:22 5.9	16:34 0.5	22:57 6.9
	Tu	23	5:30 0.5	11:28 5.7	17:40 0.7	. . . . .
☽	W	24	0:02 6.5	6:37 0.7	12:40 5.7	18:53 0.7
	Th	25	1:12 6.4	7:45 0.6	13:53 5.9	20:07 0.5
	F	26	2:18 6.4	8:47 0.3	14:58 6.4	21:13 0.2
	S	27	3:25 6.6	9:42 −0.1	15:53 6.8	22:12 −0.2
E	S	28	4:10 6.9	10:32 −0.4	16:41 7.3	23:03 −0.5
	M	29	5:08 7.0	11:18 −0.7	17:25 7.6	23:52 −0.7
	Tu	30	5:53 7.1	12:01 −0.8	18:10 7.8	. . . . .
MAY.						
○	W	1	0:35 −0.7	6:35 7.0	12:42 −0.8	18:51 7.9
	Th	2	1:18 −0.6	7:15 6.8	13:23 −0.6	19:38 7.7
	F	3	2:00 −0.4	7:55 6.5	14:03 −0.3	20:14 7.4
	S	4	2:42 0.0	8:35 6.2	14:45 0.1	20:55 7.1
S	S	5	3:24 0.3	9:17 5.8	15:27 0.6	21:38 6.6
	M	6	4:08 0.7	10:00 5.5	16:10 1.0	22:22 6.2
A	Tu	7	4:55 1.0	10:51 5.2	17:00 1.4	23:10 5.9
	W	8	5:47 1.2	11:48 5.0	17:55 1.6	. . . . .
☾	Th	9	0:03 5.6	6:42 1.2	12:46 5.1	18:55 1.6
	F	10	1:00 5.5	7:35 1.2	13:45 5.3	19:57 1.4
	S	11	2:00 5.6	8:25 1.0	14:38 5.7	20:50 1.1
E	S	12	2:55 5.8	9:13 0.6	15:25 6.2	21:42 0.7
	M	13	3:45 6.1	9:58 0.3	16:10 6.7	22:30 0.2
	Tu	14	4:31 6.4	10:43 −0.1	16:58 7.2	23:18 −0.2
	W	15	5:15 6.6	11:28 −0.3	17:37 7.7	. . . . .
●	Th	16	0:04 −0.5	6:00 6.7	12:10 −0.5	18:25 8.0
	F	17	0:50 −0.6	6:45 6.7	12:56 −0.6	19:10 8.1
	S	18	1:40 −0.6	7:32 6.6	13:43 −0.5	20:00 8.0
N P	S	19	2:30 −0.5	8:21 6.5	14:33 −0.3	20:51 7.8
	M	20	3:21 −0.3	9:15 6.3	15:27 0.0	21:46 7.4
	Tu	21	4:17 0.0	10:15 6.1	16:25 0.3	22:45 7.0
	W	22	5:15 0.2	11:20 6.0	17:32 0.4	23:47 6.6
☽	Th	23	6:18 0.3	12:28 6.1	18:42 0.5	. . . . .
	F	24	0:54 6.4	7:20 0.3	13:33 6.3	19:52 0.5
E	S	25	2:01 6.3	8:17 0.1	14:31 6.6	20:58 0.3
	S	26	3:02 6.4	9:12 −0.1	15:27 6.9	21:55 0.0
	M	27	3:56 6.4	10:08 −0.3	16:17 7.3	22:45 −0.1
	Tu	28	4:44 6.4	10:49 −0.5	17:02 7.5	23:32 −0.2
	W	29	5:28 6.4	11:34 −0.5	17:45 7.6	. . . . .
○	Th	30	0:17 −0.2	6:10 6.4	12:16 −0.4	18:27 7.6
	F	31	0:58 −0.1	6:50 6.2	12:57 −0.2	19:07 7.4
JUNE.						
S	S	1	1:38 0.0	7:30 6.1	13:38 0.0	19:47 7.2
	S	2	2:17 0.2	8:08 5.9	14:17 0.4	20:27 6.9
	M	3	2:57 0.4	8:48 5.7	14:58 0.7	21:06 6.6
A	Tu	4	3:38 0.6	9:30 5.5	15:40 1.1	21:48 6.3
	W	5	4:20 0.8	10:17 5.4	16:28 1.3	22:33 6.0
	Th	6	5:07 0.9	11:07 5.4	17:12 1.4	23:22 5.8
☾	F	7	5:53 1.0	12:00 5.5	18:08 1.4	. . . . .
	S	8	0:14 5.7	6:43 0.9	12:55 5.7	19:07 1.3
E	S	9	1:11 5.6	7:35 0.8	13:48 6.0	20:06 1.0
	M	10	2:07 5.7	8:27 0.6	14:40 6.5	21:05 0.7
	Tu	11	3:02 5.9	9:17 0.3	15:32 6.9	22:00 0.3
	W	12	3:55 6.1	10:07 0.0	16:23 7.4	22:52 0.0
	Th	13	4:45 6.3	10:58 −0.3	17:14 7.8	23:43 −0.3
	F	14	5:36 6.5	11:48 −0.5	18:04 8.1	. . . . .
● N	S	15	0:34 −0.5	6:27 6.6	12:38 −0.7	18:55 8.2
P	S	16	1:24 −0.6	7:18 6.6	13:29 −0.7	19:46 8.1
	M	17	2:15 −0.6	8:10 6.7	14:21 −0.5	20:38 7.9
	Tu	18	3:07 −0.5	9:07 6.6	15:17 −0.3	21:32 7.6
	W	19	4:00 −0.4	10:04 6.6	16:17 −0.1	22:30 7.2
	Th	20	4:55 −0.2	11:05 6.6	17:18 0.2	23:30 6.8
☽ E	F	21	5:52 0.0	12:05 6.5	18:23 0.3	. . . . .
	S	22	0:32 6.4	6:50 0.0	13:08 6.6	19:30 0.4
	S	23	1:32 6.2	7:45 0.0	14:02 6.7	20:33 0.5
	M	24	2:33 6.0	8:40 0.0	15:00 6.8	21:32 0.5
	Tu	25	3:26 6.0	9:32 0.0	15:50 7.0	22:27 0.4
	W	26	4:18 5.9	10:21 −0.1	16:39 7.1	23:13 0.3
	Th	27	5:06 5.9	11:08 −0.1	17:28 7.2	23:58 0.3
S	F	28	5:50 5.9	11:53 0.0	18:04 7.2	. . . . .
○	S	29	0:38 0.3	6:30 5.8	12:35 0.1	18:46 7.1
	S	30	1:16 0.3	7:08 5.8	13:16 0.3	19:28 7.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	1:55 0.3	7:45 5.8	13:54 0.5	20:00 6.9
	Tu	2	2:30 0.3	8:23 5.8	14:32 0.7	20:38 6.7
	W	3	3:07 0.4	9:02 5.8	15:10 0.9	21:18 6.5
	Th	4	3:45 0.5	9:45 5.8	15:50 1.0	22:00 6.2
	F	5	4:25 0.6	10:28 5.8	16:35 1.1	22:43 6.0
E	S	6	5:08 0.7	10:17 6.0	17:26 1.1	23:32 5.8
☾	S	7	5:56 0.7	12:10 6.1	18:23 1.1	. . . . .
	M	8	0:25 5.7	6:46 0.7	13:03 6.3	19:28 1.0
	Tu	9	1:22 5.7	7:42 0.6	14:02 6.6	20:30 0.8
	W	10	2:23 5.7	8:40 0.4	15:00 7.0	21:31 0.5
	Th	11	3:28 5.7	9:37 0.1	15:58 7.4	22:30 0.2
	F	12	4:22 6.1	10:30 −0.3	16:54 7.7	23:25 −0.2
N	S	13	5:18 6.4	11:30 −0.6	17:48 8.0	. . . . .
● P	S	14	0:18 −0.5	6:13 6.6	12:23 −0.8	18:40 8.2
	M	15	1:08 −0.7	7:06 6.9	13:18 −0.9	19:32 8.2
	Tu	16	1:59 −0.9	7:58 7.1	14:10 −0.9	20:23 8.0
	W	17	2:48 −0.9	8:52 7.2	15:06 −0.8	21:16 7.8
	Th	18	3:40 −0.8	9:45 7.1	16:00 −0.5	22:10 7.3
E	F	19	4:30 −0.6	10:40 7.0	16:58 −0.1	23:05 6.9
☽	S	20	5:21 −0.3	11:36 6.9	17:57 0.2	. . . . .
	S	21	0:02 6.4	6:15 −0.1	12:31 6.7	19:00 0.5
	M	22	1:00 6.0	7:12 0.1	13:30 6.6	20:05 0.8
	Tu	23	2:00 5.7	8:07 0.3	14:30 6.5	21:07 0.9
	W	24	3:00 5.5	9:03 0.4	15:25 6.6	22:02 0.9
	Th	25	3:55 5.5	9:57 0.4	16:14 6.6	22:53 0.8
S	F	26	4:45 5.5	10:46 0.3	17:00 6.7	23:37 0.7
	S	27	5:30 5.6	11:32 0.3	17:42 6.8	. . . . .
○ A	S	28	0:17 0.5	6:10 5.7	12:15 0.3	18:21 6.8
	M	29	0:53 0.4	6:48 5.8	12:53 0.3	18:58 6.8
	Tu	30	1:27 0.3	7:21 5.9	13:30 0.4	19:35 6.8
	W	31	2:00 0.2	7:57 6.1	14:07 0.4	20:12 6.7

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:34 0.2	8:32 6.2	14:42 0.5	20:50 6.6
E	F	2	3:10 0.2	9:12 6.3	15:20 0.6	21:28 6.4
	S	3	3:47 0.3	9:55 6.4	16:04 0.6	22:10 6.2
	S	4	4:27 0.4	10:40 6.5	16:58 0.7	22:55 6.0
☾	M	5	5:13 0.6	11:30 6.5	17:50 0.9	23:46 5.7
	Tu	6	6:05 0.7	12:27 6.5	18:53 0.9	. . . . .
	W	7	0:45 5.5	7:05 0.7	13:30 6.6	20:02 0.9
	Th	8	1:52 5.5	8:10 0.5	14:35 6.8	21:10 0.7
N	F	9	3:00 5.7	9:15 0.2	15:38 7.2	22:12 0.3
	S	10	4:05 6.0	10:17 −0.2	16:38 7.5	23:09 −0.1
	S	11	5:05 6.4	11:16 −0.6	17:33 7.9	. . . . .
P ●	M	12	0:00 −0.5	6:00 6.9	12:11 −1.0	18:25 8.1
	Tu	13	0:50 −0.9	6:50 7.3	13:08 −1.2	19:15 8.2
	W	14	1:38 −1.1	7:42 7.6	13:55 −1.2	20:07 8.1
E	Th	15	2:25 −1.2	8:32 7.7	14:47 −1.0	20:57 7.9
	F	16	3:13 −1.0	9:20 7.6	15:40 −0.7	21:45 7.4
	S	17	3:59 −0.7	10:10 7.4	16:31 −0.3	22:35 6.8
	S	18	4:48 −0.4	11:01 7.1	17:27 0.2	23:27 6.2
☽	M	19	5:40 0.0	11:58 6.7	18:28 0.7	. . . . .
	Tu	20	0:23 5.7	6:36 0.3	12:56 6.4	19:30 1.0
	W	21	1:25 5.3	7:35 0.7	13:56 6.2	20:37 1.2
S	Th	22	2:31 5.2	8:35 0.8	14:55 6.1	21:35 1.2
	F	23	3:32 5.2	9:32 0.8	15:47 6.2	22:27 1.0
	S	24	4:25 5.3	10:25 0.7	16:35 6.3	23:10 0.8
A	S	25	5:08 5.5	11:20 0.6	17:17 6.5	23:48 0.6
	M	26	5:46 5.8	11:52 0.4	17:56 6.6	. . . . .
○	Tu	27	0:22 0.3	6:20 6.1	12:30 0.3	18:30 6.7
	W	28	0:54 0.1	6:53 6.3	13:05 0.2	19:10 6.8
E	Th	29	1:28 0.0	7:28 6.5	13:40 0.1	19:45 6.8
	F	30	2:00 0.0	8:03 6.7	14:17 0.1	20:21 6.7
	S	31	2:34 0.0	8:43 6.9	14:55 0.1	20:59 6.6

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:10 0.1	9:22 6.9	15:40 0.3	21:38 6.3
	M	2	3:51 0.3	10:07 6.8	16:29 0.5	22:25 6.0
	Tu	3	4:38 0.5	11:00 6.7	17:25 0.7	23:15 5.7
☾	W	4	5:33 0.7	12:00 6.6	18:30 0.9	. . . . .
N	Th	5	0:20 5.5	6:38 0.8	13:07 6.5	19:40 1.0
	F	6	1:33 5.4	7:50 0.6	14:15 6.6	20:52 0.8
	S	7	2:47 5.6	9:00 0.3	15:22 6.9	21:54 0.3
	S	8	3:53 6.1	10:05 −0.2	16:22 7.2	22:50 −0.2
P	M	9	4:51 6.7	11:05 −0.7	17:17 7.6	23:40 −0.7
●	Tu	10	5:45 7.3	11:58 −1.0	18:10 7.9	. . . . .
E	W	11	0:27 −1.0	6:38 7.7	12:48 −1.2	18:58 8.0
	Th	12	1:13 −1.2	7:20 8.0	13:38 −1.3	19:45 7.9
	F	13	1:58 −1.2	8:05 8.0	14:27 −1.1	20:30 7.6
	S	14	2:43 −1.1	8:53 7.9	15:15 −0.8	21:16 7.1
	S	15	3:28 −0.7	9:39 7.6	16:04 −0.3	22:02 6.6
	M	16	4:15 −0.2	10:29 7.1	16:56 0.3	22:52 6.0
	Tu	17	5:05 0.3	11:22 6.8	17:52 0.8	23:50 5.5
☽ S	W	18	6:00 0.7	12:18 6.2	18:55 1.1	. . . . .
	Th	19	0:52 5.3	7:01 1.0	13:18 5.9	19:58 1.3
	F	20	2:00 5.1	8:05 1.2	14:18 5.8	20:58 1.3
A	S	21	3:02 5.1	9:06 1.1	15:13 5.8	21:50 1.1
	S	22	3:54 5.4	9:58 0.9	16:04 6.0	22:33 0.8
	M	23	4:37 5.7	10:45 0.7	16:48 6.2	23:10 0.5
	Tu	24	5:13 6.0	11:25 0.4	17:28 6.4	23:45 0.3
	W	25	5:48 6.4	12:01 0.2	18:04 6.6	. . . . .
E ○	Th	26	0:19 0.1	6:23 6.7	12:37 0.0	18:40 6.8
	F	27	0:52 −0.1	6:57 7.0	13:15 −0.2	19:15 6.8
	S	28	1:27 −0.2	7:35 7.2	13:53 −0.3	19:52 6.7
	S	29	2:04 −0.1	8:13 7.3	14:35 −0.2	20:31 6.5
	M	30	2:42 0.0	8:56 7.3	15:21 0.0	21:13 6.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3rd quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	3:25	9:45	16:12	22:01
			0.2	7.1	0.3	5.9
	W	2	4:14	10:39	17:10	10:59
			0.5	6.8	0.6	5.6
N ☾	Th	3	5:13	11:41	18:14	. . .
			0.7	6.6	0.9	. . .
	F	4	0:08	6:23	12:50	19:24
			5.4	0.8	6.4	0.9
	S	5	1:24	7:38	13:59	20:33
			5.5	0.7	6.4	0.6
	S	6	2:37	8:50	15:05	21:33
			5.9	0.3	6.6	0.2
P	M	7	3:40	9:55	16:06	22:27
			6.4	—0.1	7.0	—0.2
	Tu	8	4:35	10:50	17:02	23:16
			7.0	—0.6	7.3	—0.7
E	W	9	5:23	11:42	17:51	. . .
			7.6	—0.9	7.5	. . .
●	Th	10	0:02	6:10	12:31	18:35
			—1.0	7.9	—1.2	7.6
	F	11	0:47	6:55	13:18	19:20
			—1.2	8.1	—1.1	7.4
	S	12	1:30	7:39	14:04	20:05
			—1.1	8.1	—0.9	7.2
	S	13	2:13	8:23	14:50	20:47
			—0.9	7.9	—0.6	6.7
	M	14	2:57	9:10	15:37	21:32
			—0.5	7.5	—0.1	6.3
	Tu	15	3:43	9:56	16:25	22:22
			0.0	7.0	0.4	5.8
S	W	16	4:33	10:46	17:17	23:15
			0.5	6.5	0.8	5.4
☽	Th	17	5:25	11:40	18:15	. . .
			1.0	6.1	1.1	. . .
	F	18	0:17	6:27	12:37	19:13
			5.1	1.3	5.7	1.3
A	S	19	1:22	7:30	13:35	20:10
			5.0	1.4	5.6	1.2
	S	20	2:22	8:30	14:35	21:02
			5.1	1.4	5.6	1.1
	M	21	3:13	9:23	15:25	21:48
			5.5	1.1	5.8	0.9
	Tu	22	3:55	10:10	16:10	22:27
			5.8	0.8	6.0	0.5
E	W	23	4:34	10:50	16:50	23:04
			6.3	0.5	6.3	0.2
	Th	24	5:11	11:30	17:31	23:41
			6.7	0.1	6.5	—0.1
○	F	25	5:48	12:10	18:08	. . .
			7.1	—0.2	6.6	. . .
	S	26	0:19	6:27	12:51	18:47
			—0.2	7.5	—0.4	6.6
	S	27	1:00	7:08	13:33	19:27
			—0.3	7.7	—0.4	6.6
	M	28	1:38	7:52	14:19	20:10
			—0.2	7.7	—0.3	6.4
	Tu	29	2:21	8:38	15:07	20:57
			—0.1	7.5	—0.1	6.2
N	W	30	3:08	9:30	16:00	21:50
			—0.2	7.3	0.2	6.0
	Th	31	4:02	10:25	16:57	22:52
			0.3	6.9	0.5	5.7
NOVEMBER.						
☾	F	1	5:05	11:27	18:00	. . .
			0.7	6.6	0.6	. . .
	S	2	0:02	6:15	12:33	19:07
			5.7	0.7	6.4	0.6
P	S	3	1:15	7:30	13:42	20:10
			5.9	0.6	6.4	0.4
	M	4	2:22	8:39	14:50	21:08
			6.2	0.3	6.5	0.1
E	Tu	5	3:20	9:40	15:49	22:01
			6.7	0.0	6.7	—0.3
	W	6	4:11	10:35	16:40	22:50
			7.2	—0.4	6.9	—0.7
	Th	7	5:00	11:27	17:27	23:36
			7.6	—0.7	7.0	—0.9
●	F	8	5:45	12:15	18:12	. . .
			7.9	—0.8	7.0	. . .
	S	9	0:20	6:30	13:00	18:55
			—1.0	8.1	—0.7	6.9
	S	10	1:03	7:13	13:42	19:38
			—0.8	8.0	—0.5	6.6
	M	11	1:47	7:57	14:26	20:20
			—0.6	7.7	—0.3	6.3
S	Tu	12	2:30	8:42	15:10	21:05
			—0.2	7.4	0.1	6.0
	W	13	3:14	9:25	15:56	21:52
			0.3	6.9	0.4	5.7
	Th	14	4:01	10:11	16:44	22:43
			0.8	6.4	0.6	5.4
	F	15	4:51	11:00	17:35	23:38
			1.2	6.0	1.0	5.2
A ☽	S	16	5:47	11:52	18:27	. . .
			1.4	5.7	1.1	. . .
	S	17	0:35	6:45	12:47	19:20
			5.2	1.5	5.5	1.1
	M	18	1:32	7:43	13:45	20:08
			5.3	1.5	5.5	1.0
E	Tu	19	2:22	8:37	14:37	20:55
			5.6	1.2	5.6	0.7
	W	20	3:07	9:26	15:25	21:40
			6.0	0.9	5.8	0.5
	Th	21	3:50	10:13	16:10	22:22
			6.5	0.5	6.0	0.2
	F	22	4:33	10:59	16:54	23:05
			7.0	0.2	7.2	—0.1
	S	23	5:17	11:43	17:37	23:49
			7.4	0.2	6.4	—0.3
○	S	24	6:02	12:30	18:22	. . .
			7.7	—0.4	6.5	. . .
	M	25	0:32	6:47	13:16	19:07
			—0.4	7.9	—0.4	6.5
N	Tu	26	1:19	7:35	14:04	19:55
			—0.3	7.9	—0.4	6.4
	W	27	2:06	8:25	14:55	20:47
			—0.2	7.8	—0.3	6.3
P	Th	28	2:58	9:18	15:48	21:43
			0.0	7.5	—0.1	6.2
	F	29	3:55	10:13	16:45	22:45
			0.1	7.1	0.1	6.1
	S	30	4:58	11:13	17:43	23:52
			0.4	6.8	0.2	6.1
DECEMBER.						
☾	S	1	6:06	12:18	18:43	. . .
			0.5	6.5	0.3	. . .
E	M	2	0:57	7:15	13:24	19:42
			6.3	0.4	6.3	0.2
	Tu	3	1:56	8:21	14:27	20:40
			6.5	0.3	6.3	0.0
	W	4	2:54	9:23	15:24	21:32
			6.9	0.1	6.3	—0.3
	Th	5	3:48	10:20	16:17	22:22
			7.2	0.0	6.4	—0.5
	F	6	4:38	11:10	17:05	23:10
			7.5	—0.1	6.4	—0.6
	S	7	5:25	11:57	17:50	23:50
			7.7	—0.2	6.4	—0.6
●	S	8	6:10	12:41	18:35	. . .
			7.7	—0.2	6.3	. . .
S	M	9	0:41	6:52	13:24	19:17
			—0.5	7.7	—0.1	6.2
	Tu	10	1:24	7:34	14:05	19:58
			—0.2	7.4	0.0	6.0
	W	11	2:06	8:15	14:45	20:40
			0.1	7.2	0.2	5.9
	Th	12	2:50	8:57	15:27	21:23
			0.4	6.8	0.4	5.7
	F	13	3:32	9:40	16:10	22:10
			0.8	6.5	0.6	5.5
A	S	14	4:17	10:22	16:54	22:55
			1.1	6.1	0.7	5.5
	S	15	5:03	11:08	17:38	23:45
			1.3	5.8	0.9	5.5
☽	M	16	5:53	11:57	18:25	. . .
			1.4	5.7	0.9	. . .
E	Tu	17	0:37	6:48	12:48	19:14
			5.6	1.4	5.5	0.9
	W	18	1:27	7:45	13:42	20:04
			5.9	1.2	5.5	0.7
	Th	19	2:18	8:43	14:37	20:53
			6.3	1.0	5.6	0.5
	F	20	3:10	9:35	15:30	21:43
			6.6	0.6	5.8	0.2
	S	21	4:00	10:30	16:20	22:32
			7.1	0.3	6.0	—0.1
	S	22	4:50	11:20	17:12	23:23
			7.5	0.0	6.2	—0.3
N ○	M	23	5:41	12:10	18:02	. . .
			7.8	—0.3	6.4	. . .
	Tu	24	0:13	6:30	13:00	18:53
			—0.5	8.0	—0.5	6.5
P	W	25	1:04	7:21	13:51	19:45
			—0.6	8.0	—0.6	6.6
	Th	26	1:57	8:13	14:40	20:38
			—0.5	7.9	—0.5	6.7
	F	27	2:50	9:05	15:32	21:33
			—0.4	7.7	—0.5	6.7
	S	28	3:46	10:00	16:25	22:32
			—0.2	7.3	—0.4	6.7
	S	29	4:45	10:57	17:20	23:32
			0.0	6.9	—0.2	6.6
E ☾	M	30	5:48	11:58	18:15	. . .
			0.2	6.6	—0.1	. . .
	Tu	31	0:29	6:53	12:58	19:12
			6.6	0.3	6.3	0.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart unless a minus (—) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	4:18 6.5	10:46 0.2	16:41 5.8	22:50 −0.3
	Tu	2	5:15 6.8	11:45 0.0	17:40 5.4	23:46 −0.5
N	W	3	6:10 7.1	12:40 −0.2	18:35 5.6	. . . . .
○ P	Th	4	0:40 −0.7	7:03 7.3	13:32 −0.4	19:28 5.8
	F	5	1:33 −0.8	7:55 7.3	14:22 −0.5	20:20 5.9
	S	6	2:27 −0.7	8:45 7.1	15:12 −0.5	21:13 5.9
	S	7	3:20 −0.6	9:37 6.9	16:00 −0.5	22:06 5.9
	M	8	4:14 −0.3	10:28 6.6	16:49 −0.4	22:58 5.9
E	Tu	9	5:10 0.1	11:20 6.1	17:39 −0.2	23:52 5.8
	W	10	6:08 0.3	12:18 5.8	18:30 0.0	. . . . .
☾	Th	11	0:49 5.8	7:09 0.5	13:12 5.4	19:23 0.1
	F	12	1:48 5.7	8:10 −0.7	14:10 5.1	20:18 0.2
	S	13	2:45 5.7	9:12 0.9	15:10 5.0	21:12 0.3
	S	14	3:40 5.8	10:10 0.9	16:07 4.9	22:05 0.3
	M	15	4:31 5.9	11:05 0.9	17:01 4.8	22:55 0.3
	Tu	16	5:18 6.0	11:52 0.8	17:42 4.8	23:42 0.3
S A	W	17	6:01 6.0	12:34 0.7	18:31 4.8	. . . . .
	Th	18	0:26 0.3	6:42 6.1	13:18 0.5	19:10 4.9
●	F	19	1:07 0.3	7:20 6.1	13:48 0.5	19:44 4.9
	S	20	1:44 0.4	7:56 6.1	14:22 0.4	20:17 5.0
	S	21	2:19 0.5	8:30 6.0	14:55 0.3	20:51 5.1
	M	22	2:55 0.5	9:07 5.9	15:30 0.2	21:26 5.3
	Tu	23	3:32 0.5	9:44 5.8	16:06 0.2	22:05 5.5
E	W	24	4:13 0.5	10:28 5.7	16:44 0.3	22:51 5.6
	Th	25	5:01 0.6	11:07 5.5	17:30 0.4	23:44 5.7
	F	26	5:57 0.7	11:57 5.3	18:20 0.4	. . . . .
☽	S	27	0:42 5.8	7:00 0.7	12:55 5.0	19:17 0.4
	S	28	1:45 5.9	8:08 0.8	14:02 4.9	20:20 0.3
	M	29	2:51 6.0	9:20 0.7	15:18 4.9	21:25 0.2
	Tu	30	3:57 6.3	10:28 0.5	16:21 5.0	22:28 −0.1
N	W	31	4:48 6.6	11:29 0.2	17:23 5.3	23:28 −0.4

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	5:55 6.9	12:25 −0.1	18:22 5.7	. . . . .
○	F	2	0:27 −0.7	6:48 7.1	13:15 −0.4	19:15 6.0
	S	3	1:21 −0.8	7:40 7.1	14:08 −0.6	20:05 6.2
	S	4	2:14 −0.9	8:28 7.0	14:50 −0.7	20:55 6.4
	M	5	3:05 −0.8	9:17 6.8	15:35 −0.7	21:42 6.4
E	Tu	6	3:55 −0.5	10:05 6.5	16:19 −0.5	22:30 6.3
	W	7	4:47 −0.2	10:52 6.1	17:05 −0.3	23:20 6.1
	Th	8	5:38 0.2	11:42 5.6	17:52 0.0	. . . . .
☾	F	9	0:12 5.9	6:34 0.6	12:33 5.2	18:43 0.2
	S	10	1:07 5.7	7:32 0.9	13:28 4.8	19:37 0.5
	S	11	2:04 5.5	8:33 1.1	14:30 4.6	20:33 0.6
	M	12	3:01 5.5	9:35 1.2	15:32 4.5	21:31 0.7
S	Tu	13	3:56 5.5	10:31 1.1	16:30 4.6	22:25 0.6
A	W	14	4:46 5.6	11:20 1.0	17:22 4.7	23:15 0.5
	Th	15	5:32 5.7	12:05 0.8	18:05 4.8	. . . . .
	F	16	0:01 0.4	6:14 5.9	12:43 0.5	18:43 5.0
●	S	17	0:43 0.3	6:54 6.0	13:20 0.3	19:18 5.2
	S	18	1:22 0.2	7:32 6.1	13:58 0.2	19:52 5.4
	M	19	2:00 0.2	8:07 6.1	14:27 0.0	20:27 5.6
E	Tu	20	2:35 0.1	8:43 6.0	15:00 0.0	21:02 5.8
	W	21	3:14 0.2	9:20 5.9	15:36 0.1	21:42 6.0
	Th	22	3:57 0.2	10:00 5.7	16:14 0.2	22:28 6.0
	F	23	4:43 0.3	10:42 5.5	16:57 0.3	23:18 6.0
	S	24	5:37 0.5	11:30 5.2	17:48 0.4	. . . . .
☽	S	25	0:15 5.9	6:38 0.7	12:28 4.9	18:47 0.5
	M	26	1:20 5.8	7:48 0.9	13:39 4.7	19:55 0.5
N	Tu	27	2:30 5.9	9:01 0.9	14:56 4.7	21:06 0.3
	W	28	3:38 6.0	10:11 0.6	16:08 5.0	22:16 0.0
	Th	29	4:42 6.3	11:12 0.2	17:12 5.4	23:18 −0.3

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	5:40 6.6	12:05 −0.2	18:08 5.9	. . . . .
	S	2	0:16 −0.7	6:32 6.8	12:54 −0.5	19:00 6.3
○	S	3	1:09 −0.9	7:22 6.9	13:40 −0.8	19:45 6.6
E	M	4	1:59 −0.9	8:09 6.9	14:23 −0.8	20:30 6.7
	Tu	5	2:47 −0.8	8:54 6.6	15:06 −0.7	21:15 6.7
	W	6	3:33 −0.5	9:38 6.3	15:48 −0.6	22:00 6.5
	Th	7	4:20 −0.2	10:22 5.9	16:30 −0.2	22:47 6.2
	F	8	5:06 0.2	11:05 5.4	17:14 0.1	23:34 5.9
	S	9	5:55 0.7	11:52 4.9	18:00 0.5	. . . . .
☾	S	10	0:24 5.6	6:50 1.0	12:45 4.6	18:58 0.8
S	M	11	1:20 5.4	7:48 1.3	13:47 4.4	19:51 1.0
A	Tu	12	2:16 5.2	8:50 1.3	14:52 4.3	20:52 1.0
	W	13	3:13 5.2	9:50 1.2	15:54 4.4	21:52 0.9
	Th	14	4:08 5.3	10:41 1.0	16:47 4.7	22:45 0.7
	F	15	4:58 5.5	11:27 0.7	17:31 5.0	23:33 0.5
	S	16	5:43 5.7	12:07 0.4	18:11 5.3	. . . . .
	S	17	0:18 0.2	6:25 5.9	12:45 0.1	18:48 5.7
●	M	18	0:57 0.0	7:05 6.1	13:20 0.0	19:25 6.0
E	Tu	19	1:37 −0.1	7:42 6.1	13:56 −0.1	20:00 6.2
	W	20	2:17 −0.2	8:20 6.0	14:31 −0.2	20:38 6.3
	Th	21	2:57 −0.2	8:59 5.9	15:09 −0.1	21:21 6.4
	F	22	3:42 −0.1	9:38 5.6	15:48 0.0	22:07 6.3
	S	23	4:30 0.2	10:22 5.3	16:33 0.2	22:58 6.2
	S	24	5:22 0.5	11:12 5.0	17:25 0.5	23:57 5.9
N ☽	M	25	6:28 0.8	12:15 4.7	18:28 0.6	. . . . .
	Tu	26	1:02 5.8	7:33 0.9	13:30 4.6	19:40 0.6
	W	27	2:18 5.7	8:45 0.8	14:48 4.8	20:55 0.5
P	Th	28	3:22 5.8	9:58 0.5	15:58 5.2	22:05 0.2
	F	29	4:26 6.0	10:51 0.2	16:57 5.7	23:08 −0.2
	S	30	5:23 6.3	11:42 −0.2	17:50 6.2	. . . . .
	S	31	0:03 −0.5	6:15 6.5	12:29 −0.5	18:37 6.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15.47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	0:55 −0.7	7:03 6.6	13:14 −0.7	19:22 6.8
	Tu	2	1:41 −0.8	7:47 6.5	13:55 −0.8	20:06 6.8
	W	3	2:27 −0.6	8:30 6.3	14:37 −0.7	20:49 6.8
	Th	4	3:10 −0.4	9:10 5.9	15:15 −0.4	21:30 6.5
	F	5	3:52 0.0	9:50 5.5	15:55 0.0	22:13 6.2
	S	6	4:34 0.4	10:30 5.1	16:36 0.4	22:55 5.9
	S	7	5:18 0.7	11:13 4.7	17:20 0.8	23:42 5.5
S	M	8	6:05 1.0	12:02 4.5	18:10 1.1	. . . . .
☾ A	Tu	9	0:32 5.2	7:00 1.2	13:00 4.3	19:06 1.3
	W	10	1:29 5.1	8:00 1.2	14:04 4.3	20:08 1.3
	Th	11	2:25 5.1	8:58 1.1	15:07 4.5	21:12 1.1
	F	12	3:24 5.2	9:52 0.9	16:02 4.8	22:08 0.8
	S	13	4:17 5.4	10:41 0.6	16:48 5.2	23:00 0.5
	S	14	5:06 5.6	11:25 0.3	17:31 5.7	23:46 0.2
E	M	15	5:52 5.8	12:07 0.0	18:13 6.1	. . . . .
	Tu	16	0:30 −0.1	6:36 6.0	12:47 −0.2	18:54 6.5
●	W	17	1:15 −0.3	7:18 6.0	13:26 −0.3	19:36 6.7
	Th	18	1:57 −0.4	7:58 5.9	14:06 −0.3	20:20 6.8
	F	19	2:41 −0.3	8:38 5.7	14:45 −0.2	21:03 6.7
	S	20	3:28 −0.1	9:22 5.5	15:28 0.0	21:52 6.6
N	S	21	4:17 0.1	10:09 5.2	16:17 0.2	22:45 6.3
P	M	22	5:12 0.4	11:05 5.0	17:12 0.4	23:43 6.0
	Tu	23	6:13 0.6	12:10 4.8	18:18 0.6	. . . . .
☽	W	24	0:48 5.7	7:18 0.7	13:23 4.8	19:31 0.4
	Th	25	1:58 5.6	8:25 0.6	14:35 5.1	20:46 0.5
	F	26	3:05 5.6	9:36 0.4	15:40 5.5	21:55 0.2
	S	27	4:07 5.8	10:25 0.1	16:36 5.9	22:55 −0.1
E	S	28	5:04 6.0	11:15 −0.2	17:28 6.3	23:48 −0.3
	M	29	5:55 6.1	12:01 −0.5	18:15 6.7	. . . . .
	Tu	30	0:37 −0.4	6:42 6.1	12:45 −0.7	19:00 6.8

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:22 −0.4	7:23 6.0	13:27 −0.6	19:42 6.9
	Th	2	2:05 −0.3	8:08 5.8	14:07 −0.5	20:22 6.7
	F	3	2:45 −0.1	8:41 5.5	14:45 −0.1	21:00 6.5
	S	4	3:26 0.2	9:20 5.2	15:24 0.2	21:40 6.2
S	S	5	4:04 0.5	9:58 4.9	16:02 0.6	22:20 5.8
	M	6	4:45 0.7	10:39 4.7	16:42 0.9	23:01 5.5
A	Tu	7	5:28 0.9	11:23 4.5	17:27 1.1	23:48 5.3
	W	8	6:18 1.0	12:15 4.4	18:22 1.3	. . . . .
☾	Th	9	0:39 5.1	7:12 1.0	13:15 4.5	19:23 1.3
	F	10	1:36 5.0	8:07 0.9	14:17 4.7	20:26 1.2
	S	11	2:35 5.1	9:01 0.8	15:14 5.1	21:27 0.9
E	S	12	3:32 5.2	9:52 0.5	16:06 5.6	22:22 0.5
	M	13	4:27 5.4	10:42 0.1	16:54 6.0	23:15 0.1
	Tu	14	5:17 5.6	11:27 −0.1	17:41 6.5	. . . . .
	W	15	0:08 −0.2	6:05 5.7	12:14 −0.3	18:28 6.8
●	Th	16	0:52 −0.3	6:50 5.8	12:58 −0.5	19:15 7.0
	F	17	1:40 −0.4	7:36 5.7	13:42 −0.5	20:01 7.1
	S	18	2:27 −0.4	8:20 5.6	14:27 −0.4	20:50 7.0
N P	S	19	3:16 −0.2	9:09 5.5	15:15 −0.2	21:40 6.8
	M	20	4:07 0.0	10:01 5.3	16:07 0.1	22:33 6.4
	Tu	21	5:00 0.2	11:00 5.2	17:05 0.3	23:31 6.1
	W	22	5:59 0.3	12:04 5.1	18:10 0.5	. . . . .
☽	Th	23	0:33 5.8	7:00 0.4	13:10 5.2	19:22 0.6
	F	24	1:38 5.6	8:00 0.4	14:15 5.4	20:32 0.5
E	S	25	2:42 5.5	8:09 0.2	15:17 5.7	21:38 0.5
	S	26	3:46 5.6	9:54 0.0	16:18 6.1	22:37 0.2
	M	27	4:42 5.6	10:45 −0.2	17:04 6.4	23:30 0.1
	Tu	28	5:32 5.6	11:32 −0.4	17:52 6.6	. . . . .
	W	29	0:18 0.0	6:18 5.6	12:18 −0.4	18:35 6.7
○	Th	30	1:03 0.0	7:00 5.5	13:00 −0.4	19:17 6.7
	F	31	1:45 0.1	7:41 5.3	13:41 −0.2	19:57 6.5

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	2:24 0.2	8:18 5.1	14:20 0.1	20:35 6.3
	S	2	3:01 0.4	8:55 5.0	14:56 0.4	21:12 6.1
	M	3	3:37 0.5	9:30 4.8	15:32 0.7	21:48 5.8
A	Tu	4	4:15 0.6	10:08 4.7	16:10 1.0	22:27 5.6
	W	5	4:54 0.7	10:48 4.7	16:52 1.1	23:08 5.4
	Th	6	5:38 0.8	11:36 4.7	17:41 1.2	23:55 5.3
☾	F	7	6:25 0.8	12:30 4.9	18:37 1.2	. . . . .
	S	8	0:47 5.1	7:17 0.7	13:28 5.	19:38 1.1
E	S	9	1:45 5 1	8:10 0 6	14:27 5.4	20:43 0.8
	M	10	2:45 5 1	9:05 0 4	15:24 5.8	21:45 0.5
	Tu	11	3:45 5.2	10:00 0.1	16:20 6.2	22:43 0.3
	W	12	4:42 5.3	10:51 −0.1	17:12 6.6	23:40 0.0
	Th	13	5:35 5.5	11:43 −0.4	18:04 7.0	. . . . .
	F	14	0:31 −0.2	6:27 5.6	12:33 −0.5	18:55 7.2
● N	S	15	1:23 −0.3	7:17 5.6	13:23 −0.6	19:45 7.2
P	S	16	2:12 −0.4	8:07 5.7	14:13 −0.5	20:35 7.1
	M	17	3:03 −0.4	8:58 5.7	15:05 −0.4	21:27 6.9
	Tu	18	3:53 −0.3	9:52 5.6	15:59 −0.4	22:20 6.6
	W	19	4:44 −0.2	10:50 5.6	16:56 0.0	23:15 6.3
	Th	20	5:37 −0.1	11:47 5.6	18:00 0.2	. . . . .
☽ E	F	21	0:10 5.9	6:33 0.1	12:48 5.6	19:04 0.4
	S	22	1:12 5.6	7:29 0.1	13:49 5.7	20:10 0.5
	S	23	2:15 5.4	8:26 0.1	14:50 5.9	21:14 0.5
	M	24	3:17 5.3	9:20 0.0	15:46 6.0	22:15 0.5
	Tu	25	4:13 5.3	10:15 −0.1	16:39 6.2	23:10 0.5
	W	26	5:06 5.2	11:04 −0.1	17:28 6.3	23:59 0.5
	Th	27	5:55 5.2	11:51 −0.1	18:12 6.4	. . . . .
S	F	28	0:44 0.4	6:40 5.1	12:37 −0.1	18:54 6.4
○	S	29	1:25 0.4	7:21 5.1	13:18 0.1	19:33 6.3
	S	30	2:02 0.4	7:56 5.0	13:57 0.2	20:10 6.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.: ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	JULY. Time and Height of High and Low Water.			
A	M	1	2:37 0.4	8:33 4.9	14:33 0.5	20:45 6.0
	Tu	2	3:10 0.4	9:06 4.9	15:07 0.7	21:20 5.9
	W	3	3:45 0.5	9:42 4.9	15:43 0.8	21:56 5.7
	Th	4	4:21 0.5	10:18 5.0	16:22 0.9	22:34 5.5
	F	5	5:01 0.5	11:02 5.1	17:05 0.9	23:16 5.4
E	S	6	5:43 0.6	11:50 5.3	17:58 0.9	. . . . .
☾	S	7	0:08 5.3	6:32 0.5	12:46 5.5	18:58 0.9
	M	8	0:59 5.1	7:25 0.5	13:47 5.7	20:03 0.8
	Tu	9	2:00 5.0	8:21 0.4	14:48 5.9	21:10 0.7
	W	10	3:07 5.0	9:20 0.2	15:48 6.2	22:16 0.5
	Th	11	4:10 5.1	10:20 0.0	16:48 6.6	23:18 0.2
	F	12	5:10 5.2	11:18 −0.3	17:44 6.9	. . . . .
N	S	13	0:15 −0.1	6:08 5.5	12:13 −0.5	18:38 7.1
● P	S	14	1:07 −0.3	7:02 5.7	13:08 −0.7	19:30 7.2
	M	15	1:57 −0.5	7:55 5.9	14:00 −0.8	20:22 7.2
	Tu	16	2:47 −0.6	8:47 6.0	14:53 −0.7	21:12 7.0
	W	17	3:33 −0.6	9:38 6.1	15:47 −0.5	22:01 6.7
	Th	18	4:22 −0.5	10:30 6.1	16:42 −0.2	22:53 6.3
E	F	19	5:11 −0.3	11:23 6.0	17:39 0.1	23:47 5.9
☽	S	20	6:02 −0.1	12:19 6.0	18:38 0.3	. . . . .
	S	21	0:43 5.5	6:55 0.0	13:18 5.9	19:41 0.6
	M	22	1:42 5.2	7:50 0.1	14:17 5.8	20:45 0.8
	Tu	23	2:48 5.0	8:47 0.2	15:15 5.8	21:47 0.9
	W	24	3:43 4.9	9:42 0.3	16:10 5.9	22:45 0.9
	Th	25	4:40 4.9	10:37 0.2	17:02 6.0	23:36 0.8
S	F	26	5:34 4.9	11:28 0.2	17:48 6.1	. . . . .
	S	27	0:21 0.7	6:20 5.0	12:13 0.2	18:30 6.1
○ A	S	28	1:01 0.5	7:00 5.0	12:57 0.2	19:10 6.1
	M	29	1:38 0.4	7:37 5.0	13:35 0.3	19:45 6.1
	Tu	30	2:11 0.3	8:10 5.1	14:11 0.4	20:20 6.1
	W	31	2:43 0.3	8:42 5.2	14:46 0.5	20:54 6.0

Moon.	Day of— W.	Mo.	AUGUST. Time and Height of High and Low Water.			
	Th	1	3:15 0.4	9:15 5.3	15:21 0.5	21:28 5.8
E	F	2	3:48 0.2	9:48 5.5	15:56 0.6	22:03 5.7
	S	3	4:23 0.3	10:30 5.6	16:38 0.6	22:43 5.5
	S	4	5:03 0.4	11:18 5.7	17:29 0.6	23:28 5.3
☾	M	5	5:50 0.4	12:12 5.8	18:26 0.8	. . . . .
	Tu	6	0:21 5.1	6:48 0.5	13:11 5.8	19:32 0.8
	W	7	1:28 4.9	7:43 0.5	14:17 5.9	20:42 0.8
	Th	8	2:34 4.7	8:50 0.4	15:23 6.1	21:53 0.7
N	F	9	3:46 4.9	9:57 0.1	16:27 6.4	22:58 0.4
	S	10	4:53 5.2	11:00 −0.2	17:27 6.7	23:57 0.0
	S	11	5:53 5.6	11:59 −0.5	18:22 7.0	. . . . .
P	M	12	0:49 −0.3	6:48 6.0	12:59 −0.8	19:15 7.1
●	Tu	13	1:37 −0.6	7:40 6.3	13:49 −0.9	20:04 7.1
	W	14	2:24 −0.8	8:30 6.5	14:40 −0.9	20:53 7.0
E	Th	15	3:10 −0.8	9:17 6.6	15:31 −0.7	21:40 6.7
	F	16	3:54 −0.7	10:05 6.6	16:22 −0.4	22:28 6.3
	S	17	4:40 −0.5	10:50 6.4	17:14 −0.1	23:18 5.8
	S	18	5:28 −0.2	11:47 6.2	18:08 0.4	. . . . .
☽	M	19	0:10 5.4	6:18 0.1	12:42 5.9	19:07 0.7
	Tu	20	1:06 5.0	7:13 0.4	13:40 5.7	20:10 1.0
	W	21	2:08 4.7	8:12 0.6	14:40 5.6	21:14 1.1
S	Th	22	3:13 4.6	9:12 0.6	15:38 5.5	22:13 1.1
	F	23	4:15 4.6	10:10 0.6	16:32 5.6	23:06 1.0
	S	24	5:08 4.7	11:02 0.5	17:20 5.7	23:50 0.7
A	S	25	5:55 4.9	11:50 0.4	18:02 5.8	. . . . .
	M	26	0:30 0.5	6:34 5.1	12:33 0.3	18:42 5.9
○	Tu	27	1:07 0.3	7:10 5.3	13:12 0.2	19:18 6.0
	W	28	1:40 0.2	7:42 5.5	13:48 0.2	19:54 6.0
E	Th	29	2:12 0.1	8:14 5.7	14:22 0.2	20:27 5.9
	F	30	2:43 0.1	8:45 5.8	14:58 0.2	21:01 5.8
	S	31	3:15 0.1	9:22 6.0	15:36 0.2	21:37 5.7

Moon.	Day of— W.	Mo.	SEPTEMBER. Time and Height of High and Low Water.			
	S	1	3:50 0.2	10:03 6.0	16:19 0.3	22:15 5.5
	M	2	4:30 0.3	10:49 6.0	17:07 0.5	23:00 5.2
	Tu	3	5:16 0.4	11:43 5.9	18:04 0.7	23:52 4.9
☾	W	4	6:11 0.6	12:44 5.8	19:10 0.9	. . . . .
N	Th	5	0:58 4.7	7:17 0.6	13:52 5.8	20:22 0.9
	F	6	2:15 4.7	8:30 0.5	15:02 5.9	21:36 0.8
	S	7	3:32 4.9	9:41 0.2	16:10 6.1	22:40 0.4
	S	8	4:40 5.3	10:48 −0.2	17:10 6.4	23:37 0.0
P	M	9	5:39 5.8	11:48 −0.5	18:06 6.7	. . . . .
●	Tu	10	0:27 −0.4	6:32 6.3	12:43 −0.8	18:57 6.9
E	W	11	1:13 −0.7	7:20 6.7	13:35 −1.0	19:45 6.9
	Th	12	1:59 −0.9	8:06 6.9	14:24 −0.9	20:31 6.7
	F	13	2:42 −0.9	8:52 6.9	15:11 −0.8	21:18 6.5
	S	14	3:26 −0.7	9:38 6.8	15:59 −0.4	22:01 6.0
	S	15	4:08 −0.5	10:25 6.6	16:47 0.0	22:46 5.6
	M	16	4:53 −0.1	11:15 6.2	17:37 0.4	23:35 5.1
	Tu	17	5:42 0.3	12:05 5.8	18:30 0.8	. . . . .
☽ S	W	18	0:29 4.7	6:35 0.6	13:01 5.5	19:31 1.1
	Th	19	1:31 4.5	7:34 0.9	13:59 5.3	20:33 1.2
	F	20	2:37 4.4	8:37 1.0	14:58 5.2	21:33 1.2
A	S	21	3:40 4.5	9:38 0.9	15:54 5.3	22:26 1.0
	S	22	4:34 4.7	10:32 0.8	16:45 5.4	23:12 0.7
	M	23	5:20 5.0	11:20 0.6	17:30 5.6	23:52 0.4
	Tu	24	6:00 5.3	12:05 0.3	18:10 5.8	. . . . .
	W	25	0:30 0.2	6:35 5.6	12:45 0.1	18:50 5.9
E ○	Th	26	1:05 0.0	7:09 5.9	13:22 0.0	19:26 5.9
	F	27	1:38 −0.1	7:42 6.2	14:00 −0.1	20:01 5.9
	S	28	2:12 −0.1	8:20 6.3	14:38 −0.1	20:37 5.8
	S	29	2:47 0.0	9:00 6.4	15:19 0.0	21:14 5.6
	M	30	3:24 0.1	9:42 6.4	16:03 0.2	21:53 5.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W., 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance 15:47 is 3:47 p. m.

●, new moon; ☽ 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	4:05	10:30	16:52	22:40
			0.2	6.2	0.4	5.1
	W	2	4:52	11:28	17:50	23:37
			0.4	6.0	0.7	4.8
N ☾	Th	3	5:50	12:25	18:55	. . .
			0.6	5.8	0.9	. . .
	F	4	0:47	7:00	13:34	20:05
			4.7	0.7	5.7	0.9
	S	5	2:05	8:17	14:45	21:15
			4.7	0.6	5.7	0.6
	S	6	3:20	9:30	15:52	22:17
			5.1	0.3	5.9	0.3
P	M	7	4:24	10:37	16:52	23:12
			5.6	—0.1	6.2	—0.1
	Tu	8	5:18	11:35	17:47	. . .
			6.1	—0.4	6.4	. . .
E	W	9	0:01	6:10	12:28	18:35
			—0.5	6.6	—0.7	6.5
●	Th	10	0:47	6:57	13:18	19:25
			—0.8	6.9	—0.9	6.5
	F	11	1:35	7:43	14:05	20:08
			—0.9	7.1	—0.8	6.3
	S	12	2:14	8:27	14:50	20:50
			—0.9	7.0	—0.6	6.1
	S	13	2:56	9:12	15:35	21:32
			—0.6	6.8	—0.2	5.7
	M	14	3:37	9:57	16:19	22:16
			—0.3	6.5	0.1	5.3
	Tu	15	4:20	10:41	17:04	23:02
			0.1	6.1	0.5	4.9
S	W	16	5:07	11:28	17:53	23:53
			0.5	5.7	0.8	4.6
☽	Th	17	5:57	12:20	18:48	. . .
			0.9	5.4	1.1	. . .
	F	18	0:50	6:54	13:13	19:47
			4.4	1.2	5.1	1.1
A	S	19	1:52	7:57	14:10	20:42
			4.4	1.2	5.0	1.1
	S	20	2:58	9:00	15:06	21:35
			4.5	1.2	5.1	0.9
	M	21	3:48	9:55	16:02	22:28
			4.8	1.0	5.2	0.7
	Tu	22	4:35	10:45	16:50	23:08
			5.2	0.7	5.4	0.5
E	W	23	5:17	11:32	17:35	23:48
			5.6	0.4	5.6	0.1
	Th	24	5:57	12:15	18:18	. . .
			6.0	0.1	5.7	. . .
○	F	25	0:27	6:37	12:57	18:58
			—0.1	6.3	—0.1	5.8
	S	26	1:06	7:17	13:38	19:37
			—0.2	6.6	—0.2	5.7
	S	27	1:43	7:58	14:20	20:15
			—0.2	6.7	—0.2	5.6
	M	28	2:22	8:40	15:04	20:56
			—0.1	6.7	—0.1	5.4
	Tu	29	3:02	9:26	15:52	21:40
			0.0	6.6	0.1	5.2
N	W	30	3:48	10:16	16:42	22:31
			0.2	6.4	0.3	5.0
	Th	31	4:40	11:10	17:39	23:33
			0.4	6.1	0.5	4.9

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	5:41	12:12	18:42	. . .
			0.6	5.8	0.7	. . .
	S	2	0:42	6:52	13:20	19:48
			4.9	0.7	5.6	0.6
P	S	3	1:55	8:07	14:27	20:52
			5.0	0.6	5.6	0.5
	M	4	3:02	9:18	15:32	21:51
			5.4	0.4	5.7	0.2
E	Tu	5	4:08	10:24	16:33	22:45
			5.8	0.1	5.8	—0.2
	W	6	4:58	11:20	17:27	23:34
			6.3	—0.2	6.0	—0.5
	Th	7	5:48	12:13	18:16	. . .
			6.7	—0.4	6.1	. . .
●	F	8	0:20	6:38	13:00	19:01
			—0.7	6.9	—0.5	6.0
	S	9	1:05	7:21	13:46	19:43
			—0.8	7.0	—0.4	5.8
	S	10	1:48	8:03	14:30	20:26
			—0.6	6.9	—0.2	5.6
	M	11	2:30	8:46	15:12	21:07
			—0.4	6.7	0.0	5.4
S	Tu	12	3:10	9:27	15:53	21:49
			0.0	6.4	0.3	5.1
	W	13	3:52	10:10	16:34	22:32
			0.4	6.0	0.5	4.8
	Th	14	4:33	10:52	17:18	23:18
			0.7	5.7	0.7	4.6
	F	15	5:20	11:37	18:06	. . .
			1.0	5.4	0.9	. . .
A ☽	S	16	0:06	6:12	12:26	18:57
			4.5	1.2	5.1	0.9
	S	17	1:04	7:10	13:20	19:50
			4.5	1.3	5.0	0.9
	M	18	2:00	8:10	14:15	20:43
			4.7	1.2	5.0	0.8
E	Tu	19	2:56	9:08	15:12	21:32
			5.0	1.0	5.1	0.6
	W	20	3:48	10:05	16:05	22:20
			5.4	0.7	5.2	0.3
	Th	21	4:35	10:56	16:57	23:06
			5.8	0.4	5.3	0.0
	F	22	5:22	11:44	17:48	23:51
			6.2	0.1	5.4	—0.2
	S	23	6:07	12:31	18:28	. . .
			6.6	—0.1	5.5	. . .
○	S	24	0:35	6:52	13:18	19:12
			—0.3	6.8	—0.2	5.6
	M	25	1:18	7:38	14:05	19:57
			—0.3	7.0	—0.3	5.5
N	Tu	26	2:03	8:25	14:52	20:43
			—0.3	7.0	—0.2	5.4
	W	27	2:49	9:15	15:41	21:32
			—0.2	6.8	—0.1	5.3
P	Th	28	3:39	10:05	16:32	22:28
			0.0	6.5	0.1	5.2
	F	29	4:33	11:00	17:26	23:28
			0.2	6.2	0.2	5.2
	S	30	5:36	11:59	18:25	. . .
			0.4	5.9	0.3	. . .

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:32	6:44	13:01	19:24
			5.2	0.5	5.6	0.3
E	M	2	1:37	7:55	14:05	20:23
			5.4	0.5	5.5	0.2
	Tu	3	2:41	9:03	15:10	21:21
			5.7	0.4	5.5	0.0
	W	4	3:42	10:16	16:10	22:15
			6.1	0.3	5.5	—0.2
	Th	5	4:37	11:08	17:05	23:05
			6.4	0.1	5.6	—0.4
	F	6	5:27	11:57	17:54	23:55
			6.6	0.0	5.6	—0.5
	S	7	6:15	12:48	18:40	. . .
			6.8	0.0	5.5	. . .
●	S	8	0:40	6:59	13:28	19:25
			0.5	6.8	0.0	5.4
S	M	9	1:24	7:42	14:10	20:06
			0.4	6.7	0.1	5.3
	Tu	10	2:06	8:22	14:50	20:46
			—0.1	6.5	0.2	5.1
	W	11	2:46	9:01	15:28	21:25
			0.2	6.3	0.3	5.0
	Th	12	3:25	9:40	16:05	22:04
			0.5	6.0	0.5	4.8
	F	13	4:04	10:18	16:44	22:43
			0.8	5.7	0.6	4.8
A	S	14	4:45	10:58	17:25	23:27
			1.0	5.5	0.6	4.8
	S	15	5:30	11:40	18:10	. . .
			1.2	5.2	0.7	. . .
☽	M	16	0:15	6:21	12:28	18:57
			4.9	1.2	5.1	0.7
E	Tu	17	1:10	7:18	13:20	19:48
			5.0	1.2	5.0	0.7
	W	18	2:05	8:20	14:18	20:40
			5.3	1.0	5.0	0.5
	Th	19	3:00	9:20	15:18	21:34
			5.6	0.8	5.0	0.3
	F	20	3:56	10:19	16:11	22:07
			6.0	0.5	5.1	0.1
	S	21	4:49	11:15	17:10	23:18
			6.4	0.3	5.2	—0.2
	S	22	5:40	12:08	18:02	. . .
			6.7	0.0	5.3	. . .
N ○	M	23	0:08	6:32	13:00	18:52
			—0.3	7.0	—0.2	5.5
	Tu	24	1:00	7:22	13:50	19:42
			—0.5	7.1	—0.3	5.6
P	W	25	1:48	8:11	14:38	20:33
			—0.5	7.1	—0.3	5.6
	Th	26	2:39	9:01	15:27	21:25
			—0.4	7.0	—0.3	5.7
	F	27	3:32	9:53	16:17	22:20
			—0.3	6.7	—0.2	5.7
	S	28	4:27	10:46	17:07	23:15
			—0.1	6.4	—0.1	5.7
	S	29	5:27	11:40	18:00	. . .
			0.1	6.0	0.0	. . .
E ☾	M	30	0:18	6:28	12:38	18:55
			5.7	0.8	5.7	0.1
	Tu	31	1:15	7:35	18:41	19:53
			5.8	0.5	5.4	0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon: for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	6:22 0.7	10:25 0.4	17:19 1.8	. . .
	Tu	2	0:34 —0.4	7:18 0.7	11:20 0.4	18:13 1.9
N	W	3	1:29 —0.5	8:05 0.7	12:16 0.3	19:07 2.0
♀ P	Th	4	2:19 —0.6	8:50 0.7	13:11 0.2	20:00 2.0
	F	5	3:06 —0.6	9:39 0.8	14:07 0.1	20:56 2.0
	S	6	3:52 —0.5	10:21 0.9	15:04 0.1	21:50 1.9
	S	7	4:34 —0.4	11:06 1.0	16:04 0.1	22:48 1.7
	M	8	5:16 —0.3	11:50 1.1	17:09 0.1	23:46 1.5
E	Tu	9	6:00 —0.1	12:34 1.2	18:16 0.1	. . .
	W	10	0:48 1.2	6:46 0.0	13:21 1.2	19:29 0.1
☾	Th	11	2:02 1.0	7:28 0.2	14:14 1.3	20:41 0.1
	F	12	3:24 0.9	8:08 0.3	15:10 1.4	22:12 0.0
	S	13	4:42 0.7	8:52 0.4	16:06 1.5	23:32 —0.1
	S	14	5:54 0.7	9:42 0.5	17:00 1.5	. . .
	M	15	0:32 —0.2	6:54 0.6	10:34 0.5	17:46 1.6
	Tu	16	1:19 —0.2	7:42 0.6	11:25 0.5	18:30 1.6
S A	W	17	1:52 —0.3	8:24 0.7	12:14 0.5	19:10 1.7
	Th	18	2:22 —0.3	9:00 0.7	13:00 0.5	19:49 1.7
●	F	19	2:51 —0.3	9:31 0.7	13:40 0.4	20:24 1.7
	S	20	3:18 —0.3	10:00 0.8	14:24 0.3	21:00 1.6
	S	21	3:45 —0.3	10:28 0.9	15:07 0.2	21:35 1.6
	M	22	4:12 —0.2	10:50 1.0	15:50 0.2	22:12 1.5
	Tu	23	4:42 —0.1	11:12 1.0	16:36 0.1	22:51 1.3
E	W	24	5:18 0.0	11:35 1.2	17:30 0.1	23:38 1.2
	Th	25	5:48 0.1	12:04 1.2	18:29 0.0	. . .
	F	26	0:34 1.0	6:19 0.2	12:48 1.3	19:28 0.0
☽	S	27	1:54 0.8	6:54 0.3	13:38 1.5	20:44 0.0
	S	28	3:42 0.7	7:40 0.3	14:44 1.6	22:09 —0.1
	M	29	5:10 0.6	8:36 0.4	15:58 1.7	23:28 —0.2
	Tu	30	6:15 0.6	9:46 0.4	17:04 1.8	. . .
N	W	31	0:30 —0.3	7:07 0.6	11:00 0.3	18:08 1.9

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	1:22 —0.4	7:52 0.7	12:10 0.2	19:08 1.9
○	F	2	2:10 —0.4	8:32 0.8	13:10 0.1	20:04 1.9
	S	3	2:50 —0.4	9:12 1.0	14:10 0.0	21:00 1.9
	S	4	3:28 —0.3	9:49 1.1	15:04 —0.1	21:48 1.8
	M	5	4:04 —0.3	10:29 1.2	16:01 —0.1	22:38 1.6
E	Tu	6	4:46 —0.1	11:08 1.3	16:58 —0.1	23:29 1.4
	W	7	5:20 0.0	11:44 1.4	17:54 —0.1	. . .
	Th	8	0:25 1.1	5:53 0.1	12:30 1.4	18:51 0.0
☾	F	9	1:36 0.9	6:20 0.2	13:20 1.4	20:06 0.0
	S	10	2:54 0.7	7:00 0.3	14:19 1.4	21:38 0.0
	S	11	4:24 0.6	7:42 0.4	15:22 1.4	23:18 0.0
	M	12	5:49 0.6	8:44 0.5	16:26 1.4	. . .
S	Tu	13	0:24 —0.1	6:48 0.6	10:01 0.6	17:22 1.5
A	W	14	1:02 —0.1	7:30 0.6	11:12 0.6	18:14 1.5
	Th	15	1:35 —0.2	8:01 0.6	12:10 0.5	18:57 1.6
	F	16	1:58 —0.2	8:28 0.8	12:54 0.4	19:36 1.6
●	S	17	2:21 —0.2	8:54 0.9	13:36 0.2	20:16 1.6
	S	18	2:44 —0.2	9:18 1.0	14:16 0.1	20:51 1.6
	M	19	3:10 —0.2	9:37 1.1	14:58 0.0	21:27 1.5
E	Tu	20	3:42 —0.1	9:54 1.2	15:39 —0.1	22:02 1.4
	W	21	4:06 0.0	10:14 1.3	16:22 —0.1	22:42 1.2
	Th	22	4:33 0.1	10:42 1.3	17:10 —0.2	23:26 1.0
	F	23	5:01 0.1	11:16 1.4	18:01 —0.2	. . .
	S	24	0:18 0.8	5:31 0.2	12:00 1.5	19:07 —0.1
☽	S	25	1:40 0.6	6:06 0.3	12:56 1.6	20:26 —0.1
	M	26	3:40 0.6	6 50 0.4	14:11 1.6	21:57 —0.1
N	Tu	27	5:11 0.6	8:02 0.5	15:40 1.6	23:21 —0.2
	W	28	6:10 0.6	9:37 0.4	17:02 1.7	. . .
	Th	29	0:24 —0.2	6:51 0.7	11:12 0.3	18:10 1.8

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	1:08 —0.3	7:28 0.9	12:16 0.1	19:10 1.8
	S	2	1:46 —0.2	8:04 1.0	13:17 —0.1	20:02 1.8
○	S	3	2:21 —0.2	8:38 1.2	14:10 —0.2	20:50 1.7
E	M	4	3:00 —0.2	9:14 1.3	15:01 —0.3	21:38 1.6
	Tu	5	3:31 —0.1	9:44 1.4	15:49 —0.3	22:24 1.4
	W	6	4:02 0.0	10:20 1.5	16:34 —0.3	23:12 1.2
	Th	7	4:32 0.1	10:58 1.5	17:24 —0.2	. . .
	F	8	0:06 1.0	5:02 0.2	11:40 1.5	18:21 —0.1
	S	9	1:08 0.8	5:30 0.3	12:24 1.5	19:24 0.0
☾	S	10	2:28 0.7	6:01 0.4	13:22 1.4	20:49 0.0
S	M	11	4:10 0.6	6:44 0.5	14:34. 1.3	22:37 0.1
A	Tu	12	5:36 0.6	8:00 0.6	15:50 1.3	23:47 0.0
	W	13	6:22 0.7	9:44 0.6	16:58 1.3	. . .
	Th	14	0:24 0.0	6:54 0.8	11:10 0.5	17:52 1.4
	F	15	0:52 —0.1	7:20 0.9	12:08 0.4	18:38 1.4
	S	16	1:12 —0.1	7:42 1.0	12:46 0.2	19:20 1.5
	S	17	1:37 —0.1	8:06 1.1	13:24 0.0	19:59 1.5
●	M	18	2:08 —0.1	8:22 1.2	14:04 —0.1	20:37 1.4
E	Tu	19	2:32 0.0	8:44 1.3	14:42 —0.2	21:14 1.4
	W	20	3:00 0.0	9:08 1.4	15:24 —0.3	21:54 1.3
	Th	21	3:24 0.1	9:33 1.5	16:02 —0.4	22:36 1.1
	F	22	3:51 0.1	10:04 1.6	16:51 —0.4	23:21 0.9
	S	23	4:20 0.2	10:42 1.6	17:46 —0.3	. . .
	S	24	0:21 0.7	4:52 0.3	11:28 1.6	18:52 —0.2
N ☽	M	25	1:56 0.6	5:32 0.4	12:29 1.6	20:12 —0.1
	Tu	26	3:34 0.6	6:30 0.4	14:00 1.5	21:45 0.0
	W	27	4:54 0.7	8:06 0.4	15:41 1.5	23:05 0.0
P	Th	28	5:42 0.7	9:54 0.4	17:04 1.5	23:59 0.0
	F	29	6:20 0.9	11:20 0.2	18:10 1.6	. . .
	S	30	0:38 0.0	6:53 1.1	12:24 0.0	19:06 1.6
	S	31	1:18 —0.1	7:28 1.3	13:17 —0.2	19:56 1.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.6 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Central Standard 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	5:20	11:50	16:27	22:57
			−0.3	0.7	0.4	1.7
	W	2	6:18	13:08	17:02	23:52
			−0.2	0.6	0.4	1.6
N ☾	Th	3	7:27	14:48	17:55	. . .
			−0.1	0.7	0.5	. . .
	F	4	1:09	8:52	16:17	19:22
			1.5	0.0	0.7	0.4
	S	5	2:58	10:15	17:12	21:10
			1.4	0.0	0.7	0.4
	S	6	4:28	11:18	17:50	22:45
			1.4	0.0	0.8	0.2
P	M	7	5:40	12:05	18:25	23:56
			1.5	0.0	1.0	0.0
	Tu	8	6:40	12:48	18:58	. . .
			1.5	0.0	1.2	. . .
E	W	9	0:52	7:32	13:22	19:38
			−0.2	1.5	0.0	1.4
●	Th	10	1:40	8:20	13:53	20:03
			−0.4	1.5	0.0	1.6
	F	11	2:26	9:08	14:23	20:40
			−0.5	1.3	0.1	1.7
	S	12	3:13	9:58	14:55	21:18
			−0.5	1.2	0.1	1.8
	S	13	4:00	10:40	15:27	21:57
			−0.5	1.0	0.2	1.7
	M	14	4:46	11:31	15:57	22:36
			−0.4	0.8	0.3	1.7
	Tu	15	5:36	12:31	16:34	23:21
			−0.3	0.7	0.4	1.5
S	W	16	6:30	13:44	17:12	. . .
			−0.1	0.6	0.5	. . .
☽	Th	17	0:13	7:33	15.09	18:11
			1.4	0.0	0.6	0.5
	F	18	1:27	8:48	16:22	19:40
			1.3	0.1	0.7	0.6
A	S	19	2:54	10:01	17:12	21:33
			1.2	0.1	0.8	0.5
	S	20	4:10	10:49	17:42	22:52
			1.1	0.1	0.9	0.4
	M	21	5:13	11:28	18:08	23:42
			1.1	0.1	1.1	0.3
	Tu	22	6:08	12:01	18:27	. . .
			1.2	0.1	1.1	. . .
E	W	23	0:20	6:48	12:30	18:50
			0.1	1.2	0.1	1.3
	Th	24	0:55	7:30	12:55	19:12
			−0.1	1.2	0.1	1.4
○	F	25	1:28	8:10	13:22	19:36
			−0.3	1.2	0.2	1.6
	S	26	2:08	8:53	13:50	20:06
			−0.4	1.1	0.2	1.7
	S	27	2:49	9:33	14:20	20:38
			−0.5	0.9	0.2	1.8
	M	28	3:35	10:17	14:53	21:15
			−0.5	0.8	0.3	1.8
	Tu	29	4:21	11:07	15:26	21:56
			−0.5	0.7	0.3	1.8
N	W	30	5:12	12:05	16:02	22:44
			−0.4	0.6	0.3	1.7
	Th	31	6:10	13:20	16:58	23:47
			−0.3	0.6	0.3	1.6

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	7:15	14:32	18:10	. . .
			−0.1	0.6	0.4	. . .
	S	2	1:14	8:27	15:37	19:44
			1.4	0.0	0.8	0.4
P	S	3	2:57	9:33	16:25	21:30
			1.3	0.1	0.9	0.3
	M	4	4:22	10:38	17:01	22:51
			1.3	0.1	1.1	0.1
E	Tu	5	5:33	11:24	17:39	23:50
			1.3	0.1	1.3	−0.2
	W	6	6:34	12:02	18:17	. . .
			1.3	0.2	1.5	. . .
	Th	7	0:43	7:25	12:37	18:57
			−0.3	1.2	0.2	1.6
●	F	8	1:34	8:13	13:08	19:34
			−0.5	1.1	0.2	1.8
	S	9	2:20	8:57	13:40	20:12
			−0.5	1.0	0.2	1.8
	S	10	3:03	9:43	14:13	20:51
			−0.5	0.8	0.3	1.8
	M	11	3:47	10:30	14:50	21:30
			−0.5	0.8	0.3	1.8
S	Tu	12	4:32	11:21	15:28	22:08
			−0.4	0.7	0.4	1.7
	W	13	5:14	12:15	16:12	22:50
			−0.3	0.7	0.5	1.5
	Th	14	6:00	13:17	16:58	23:39
			−0.2	0.7	0.5	1.4
	F	15	6:48	14:21	18:02	. . .
			0.0	0.8	0.5	. . .
A ☽	S	16	0:40	7:37	15:18	19:25
			1.2	0.1	0.8	0.5
	S	17	2:00	8:29	16:00	20:58
			1.1	0.2	0.9	0.4
	M	18	3:20	9:28	16:30	22:09
			1.0	0.2	1.0	0.3
E	Tu	19	4:31	10:12	16:57	23:02
			1.0	0.3	1.1	0.2
	W	20	5:33	10:47	17:25	23:40
			1.0	0.3	1.3	0.0
	Th	21	6:27	11:23	17:55	. . .
			1.0	0.3	1.5	. . .
	F	22	0:26	7:12	11:58	18:27
			−0.2	1.0	0.3	1.6
	S	23	1:10	7:57	12:40	19:00
			−0.4	0.9	0.3	1.8
○	S	24	1:54	8:42	13:08	19:38
			−0.5	0.8	0.3	1.9
	M	25	2:40	9:27	13:45	20:18
			−0.6	0.7	0.3	2.0
N	Tu	26	3:27	10:13	14:26	21:02
			−0.6	0.7	0.3	2.0
	W	27	4:15	11:05	15:10	21:52
			−0.5	0.7	0.3	1.9
P	Th	28	5:05	11:57	16:05	22:48
			−0.4	0.7	0.3	1.7
	F	29	5:57	12:52	17:12	23:55
			−0.3	0.8	0.3	1.5
	S	30	6:52	13:50	18:27	. . .
			−0.1	0.8	0.3	. . .

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	1:18	7:47	14:39	19:59
			1.3	0.1	1.0	0.2
E	M	2	2:45	8:52	15:26	21:27
			1.2	0.2	1.1	0.1
	Tu	3	4:10	9:43	16:17	22:38
			1.1	0.2	1.3	0.0
	W	4	5:28	10:28	17:02	23:46
			1.1	0.3	1.5	−0.2
	Th	5	6:25	11:08	17:46	. . .
			1.0	0.3	1.6	. . .
	F	6	0:43	7:17	11:47	18:30
			−0.4	0.9	0.3	1.8
	S	7	1:33	8:04	12:27	19:10
			−0.4	0.8	0.4	1.8
●	S	8	2:18	8:50	13:07	19:53
			−0.5	0.7	0.3	1.9
S	M	9	2:59	9:37	13:46	20:33
			−0.5	0.7	0.3	1.8
	Tu	10	3:38	10:20	14:26	21:12
			−0.4	0.7	0.3	1.7
	W	11	4:15	11:04	15:10	21:51
			−0.3	0.7	0.3	1.6
	Th	12	4:51	11:51	15:57	22:31
			−0.2	0.7	0.4	1.5
	F	13	5:27	12:36	16:48	23:13
			−0.1	0.8	0.4	1.3
A	S	14	6:02	13:16	17.46	. . .
			−0.1	0.9	0.4	. . .
	S	15	0:02	6:39	13:52	18:52
			1.2	0.0	1.0	0.4
☽	M	16	1:00	7:27	14:28	20:03
			1.0	0.1	1.0	0.3
E	Tu	17	2:13	8:06	15:07	21:13
			0.9	0.2	1.1	0.2
	W	18	3:40	8:45	15:45	22:08
			0.8	0.3	1.3	0.1
	Th	19	5:01	9:28	16:24	23:08
			0.8	0.3	1.4	−0.1
	F	20	6:00	10:13	17:05	. . .
			0.7	0.4	1.6	. . .
	S	21	0:04	6:55	11:01	17:49
			−0.3	0.7	0.4	1.8
	S	22	0:58	7:44	11:47	18:34
			−0.4	0.7	0.3	1.9
N ○	M	23	1:45	8:30	12:36	19:23
			−0.6	0.7	0.3	2.0
	Tu	24	2:33	9:15	13:26	20:11
			−0.6	0.7	0.3	2.0
P	W	25	3:20	9:58	14:18	21:02
			−0.6	0.8	0.2	2.0
	Th	26	4:05	10:43	15:13	21:56
			−0.5	0.8	0.1	1.9
	F	27	4:50	11:28	16:13	22:55
			−0.4	0.9	0.1	1.7
	S	28	5:35	12:12	17:18	23:58
			−0.2	1.0	0.1	1.5
	S	29	6:18	12:55	18:30	. . .
			−0.1	1.1	0.1	. . .
E ☾	M	30	1:07	7:10	13:44	19:49
			1.2	0.1	1.2	0.1
	Tu	31	2:27	7:55	14:39	21:03
			1.1	0.2	1.3	0.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.6 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	7:40 −0.4	17:47 1.3	21:14 1.1	22:27 1.2
	Tu	2	8:32 −0.5	18:43 1.4	. . . .	. . . .
N	W	3	9:24 −0.6	19:31 1.4	. . . .	. . . .
○ P	Th	4	10:16 −0.6	20:07 1.4	. . . .	. . . .
	F	5	11:08 −0.5	20:36 1.3	. . . .	. . . .
	S	6	12:00 −0.4	20:58 1.2	. . . .	. . . .
	S	7	2:15 0.9	3:47 1.0	12:50 −0.2	21:17 1.2
	M	8	2:45 0.8	5:43 0.9	13:48 0.0	21:33 1.1
E	Tu	9	3:33 0.7	7:46 0.8	14:31 0.2	21:50 1.0
	W	10	4:20 0.5	9:43 0.7	15:18 0.4	22:07 1.0
☾	Th	11	5:09 0.3	12:00 0.8	16:12 0.6	22:20 1.0
	F	12	5:54 0.2	14:56 0.9	17:22 0.8	22:29 1.0
	S	13	6:38 0.0	16:17 1.0	18:56 0.9	21:49 1.0
	S	14	7:18 −0.1	17:11 1.2	. . . .	. . . .
	M	15	7:57 −0.2	17:54 1.3	. . . .	. . . .
	Tu	16	8:36 −0.3	18:35 1.3	. . . .	. . . .
S A	W	17	9:17 −0.3	19:13 1.4	. . . .	. . . .
	Th	18	9:49 −0.3	19:52 1.4	. . . .	. . . .
●	F	19	10:25 −0.3	20:23 1.3	. . . .	. . . .
	S	20	11:00 −0.3	20:45 1.2	. . . .	. . . .
	S	21	11:42 −0.2	20:50 1.2	. . . .	. . . .
	M	22	12:24 −0.1	20:48 1.0	. . . .	. . . .
	Tu	23	1:54 0.8	5:10 0.9	13:11 0.1	20:46 0.9
E	W	24	2:13 0.6	7:00 0.8	13:56 0.3	20:44 0.9
	Th	25	2:48 0.4	8:53 0.8	14:39 0.5	20:39 0.9
	F	26	3:35 0.2	10:51 0.9	15:20 0.7	20:34 0.9
☽	S	27	4:30 0.0	13:04 1.0	15:40 0.8	20:30 0.9
	S	28	5:27 −0.2	16:49 1.1	. . . .	. . . .
	M	29	6:26 −0.3	17:27 1.2	. . . .	. . . .
	Tu	30	7:27 −0.4	18:00 1.4	. . . .	. . . .
N	W	31	8:25 −0.5	18:31 1.3	. . . .	. . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	9:22 −0.5	18:57 1.3	22:35 1.2	. . . .
○	F	2	0:35 1.3	10:15 −0.4	19:15 1.2	23:15 1.1
	S	3	2:20 1.1	11:05 −0.3	19:30 1.1	. . . .
	S	4	0:00 0.9	3:55 1.0	11:55 −0.2	19:45 1.0
	M	5	0:48 0.7	5:26 1.0	12:44 0.0	20:00 1.0
E	Tu	6	1:37 0.6	6:51 0.9	13:34 0.3	20:20 0.9
	W	7	2:27 0.4	8:21 0.8	14:20 0.5	20:34 0.9
	Th	8	3:18 0.3	10:02 0.8	15:06 0.7	20:47 0.9
☾	F	9	4:10 0.2	12:34 0.9	16:05 0.8	20:50 0.9
	S	10	5:00 0.1	14:50 1.0	17:37 0.9	20:15 1.0
	S	11	5:50 0.0	15:53 1.1	. . . .	. . . .
	M	12	6:37 −0.1	16:38 1.2	. . . .	. . . .
S	Tu	13	7:20 −0.2	17:18 1.3	. . . .	. . . .
A	W	14	8:05 −0.2	17:57 1.3	. . . .	. . . .
	Th	15	8:49 −0.2	18:26 1.3	. . . .	. . . .
	F	16	9:33 −0.2	18:58 1.2	. . . .	. . . .
●	S	17	10:14 −0.2	19:18 1.1	23:42 1.0	. . . .
	S	18	1:48 1.0	10:56 −0.1	19:18 1.0	23:40 0.8
	M	19	3:37 1.0	11:41 0.0	19:10 0.9	23:50 0.7
E	Tu	20	5:00 1.0	12:28 0.2	19:06 0.8	. . . .
	W	21	0:20 0.5	6:26 1.0	13:14 0.4	19:02 0.8
	Th	22	1:00 0.3	7:53 1.0	14:00 0.6	18:53 0.8
	F	23	1:57 0.1	9:25 1.0	14:44 0.8	18:46 0.9
	S	24	2:47 0.0	11:20 1.0	15:30 0.9	18:49 1.0
☽	S	25	3:50 −0.2	16:20 1.1	. . . .	. . . .
	M	26	4:56 −0.3	16:10 1.2	. . . .	. . . .
N	Tu	27	6:05 −0.3	16:49 1.2	. . . .	. . . .
	W	28	7:12 −0.3	17:14 1.2	20:35 1.1	22:05 1.2
	Th	29	8:20 −0.3	17:32 1.1	21:11 1.0	. . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:20 1.1	9:14 −0.3	17:43 1.1	21:51 0.9
	S	2	2:05 1.1	10:09 −0.1	17:50 1.0	22:30 0.7
○	S	3	3:35 1.0	11:00 0.0	18:00 0.9	23:12 0.6
E	M	4	4:52 1.0	11:50 0.2	18:16 0.8	. . . .
	Tu	5	0:00 0.4	6:07 1.0	12:41 0.3	18:30 0.8
	W	6	0:44 0.3	7:23 1.0	13:32 0.5	18:45 0.8
	Th	7	1:35 0.2	8:45 1.0	14:20 0.8	18:50 0.9
	F	8	2:24 0.1	10:20 1.0	15:20 0.8	18:38 0.9
	S	9	3:08 0.0	12:24 1.0	. . . .	. . . .
☾	S	10	3:58 0.0	13:51 1.1	. . . .	. . . .
S	M	11	4:55 0.0	14:55 1.2	. . . .	. . . .
A	Tu	12	5:45 −0.1	15:36 1.2	. . . .	. . . .
	W	13	6:35 −0.1	16:11 1.2	. . . .	. . . .
	Th	14	7:28 −0.1	16:45 1.2	. . . .	. . . .
	F	15	8:21 −0.1	17:05 1.1	22:30 0.9	. . . .
	S	16	0:23 0.9	9:15 0.0	17:15 1.0	22:05 0.8
	S	17	2:19 0.9	10:05 0.1	17:20 0.9	22:10 0.7
●	M	18	3:37 1.0	10:55 0.2	17:20 0.8	22:27 0.5
E	Tu	19	4:45 1.1	11:40 0.3	17:15 0.7	22:55 0.3
	W	20	5:55 1.1	12:34 0.5	17:07 0.7	23:35 0.1
	Th	21	7:08 1.1	13:27 0.7	16:56 0.8	. . . .
	F	22	0:30 0.0	8:30 1.2	14:21 0.8	16:47 0.9
	S	23	1:18 −0.2	10:03 1.2	15:26 0.9	16:48 1.0
	S	24	2:13 −0.2	12:12 1.2	. . . .	. . . .
N ☽	M	25	3:17 −0.3	13:55 1.2	. . . .	. . . .
	Tu	26	4:30 −0.3	15:00 1.2	. . . .	. . . .
	W	27	5:44 −0.2	15:31 1.1	19:45 1.0	20:50 1.1
P	Th	28	6:55 −0.1	16:50 1.0	20:04 0.9	23:50 1.0
	F	29	8:00 0.0	15:56 1.0	20:40 0.7	. . . .
	S	30	1:40 1.0	9:05 0.1	16:00 0.9	21:20 0.6
	S	31	3:09 1.0	10:02 0.2	16:13 0.8	22:00 0.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.6 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	5:20	11:50	16:27	22:57
			−0.3	0.7	0.4	1.7
	W	2	6:18	13:08	17:02	23:52
			−0.2	0.6	0.4	1.6
N	Th	3	7:27	14:48	17:55	. . .
☾			−0.1	0.7	0.5	. . .
	F	4	1:09	8:52	16:17	19:22
			1.5	0.0	0.7	0.4
	S	5	2:53	10:15	17:12	21:10
			1.4	0.0	0.7	0.4
	S	6	4:28	11:18	17:50	22:45
			1.4	0.0	0.8	0.2
P	M	7	5:40	12:06	18:25	23:56
			1.5	0.0	1.0	0.0
	Tu	8	6:40	12:48	18:58	. . .
			1.5	0.0	1.2	. . .
E	W	9	0:52	7:32	13:22	19:38
			−0.2	1.5	0.0	1.4
●	Th	10	1:40	8:20	13:53	20:03
			−0.4	1.5	0.0	1.6
	F	11	2:26	9:08	14:23	20:40
			−0.5	1.3	0.1	1.7
	S	12	3:13	9:53	14:55	21:18
			−0.5	1.2	0.1	1.8
	S	13	4:00	10:40	15:27	21:57
			−0.5	1.0	0.2	1.7
	M	14	4:46	11:31	15:57	22:36
			−0.4	0.8	0.3	1.7
	Tu	15	5:36	12:31	16:34	23:21
			−0.3	0.7	0.4	1.5
S	W	16	6:30	13:44	17:12	. . .
			−0.1	0.6	0.5	. . .
☽	Th	17	0:13	7:33	15.09	18:11
			1.4	0.0	0.6	0.5
	F	18	1:27	8:48	16:22	19:40
			1.3	0.1	0.7	0.6
A	S	19	2:54	10:01	17:12	21:33
			1.2	0.1	0.8	0.5
	S	20	4:10	10:49	17:42	22:52
			1.1	0.1	0.9	0.4
	M	21	5:13	11:28	18:08	23:42
			1.1	0.1	1.1	0.3
	Tu	22	6:03	12:01	18:27	. . .
			1.2	0.1	1.1	. . .
E	W	23	0:20	6:48	12:30	18:50
			0.1	1.2	0.1	1.3
	Th	24	0:55	7:30	12:55	19:12
			−0.1	1.2	0.1	1.4
○	F	25	1:28	8:10	13:22	19:36
			−0.3	1.2	0.2	1.6
	S	26	2:06	8:53	13:50	20:06
			−0.4	1.1	0.2	1.7
	S	27	2:49	9:33	14:20	20:38
			−0.5	0.9	0.2	1.8
	M	28	3:35	10:17	14:53	21:15
			−0.5	0.8	0.3	1.8
	Tu	29	4:21	11:07	15:26	21:56
			−0.5	0.7	0.3	1.8
N	W	30	5:12	12:05	16:02	22:44
			−0.4	0.6	0.3	1.7
	Th	31	6:10	13:20	16:58	23:47
			−0.3	0.6	0.3	1.6

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	7:15	14:32	18:10	. . .
			−0.1	0.6	0.4	. . .
	S	2	1:14	8:27	15:37	19:44
			1.4	0.0	0.8	0.4
P	S	3	2:57	9:33	16:25	21:30
			1.3	0.1	0.9	0.3
	M	4	4:22	10:38	17:01	22:51
			1.3	0.1	1.1	0.1
E	Tu	5	5:33	11:24	17:39	23:50
			1.3	0.1	1.3	−0.2
	W	6	6:34	12:02	18:17	. . .
			1.3	0.2	1.5	. . .
	Th	7	0:43	7:25	12:37	18:57
			−0.3	1.2	0.2	1.6
●	F	8	1:34	8:13	13:08	19:34
			−0.5	1.1	0.2	1.8
	S	9	2:20	8:57	13:40	20:12
			−0.5	1.0	0.2	1.8
	S	10	3:03	9:43	14:13	20:51
			−0.5	0.8	0.3	1.8
	M	11	3:47	10:30	14:50	21:30
			−0.5	0.8	0.3	1.8
S	Tu	12	4:32	11:21	15:28	22:08
			−0.4	0.7	0.4	1.7
	W	13	5:14	12:15	16:12	22:50
			−0.3	0.7	0.5	1.5
	Th	14	6:00	13:17	16:58	23:39
			−0.2	0.7	0.5	1.4
	F	15	6:48	14:21	18:02	. . .
			0.0	0.8	0.5	. . .
A	S	16	0:40	7:37	15:18	19:25
☽			1.2	0.1	0.8	0.5
	S	17	2:00	8:29	16:00	20:53
			1.1	0.2	0.9	0.4
	M	18	3:20	9:28	16:30	22:09
			1.0	0.2	1.0	0.3
E	Tu	19	4:31	10:12	16:57	23:02
			1.0	0.3	1.1	0.2
	W	20	5:33	10:47	17:25	23:40
			1.0	0.3	1.3	0.0
	Th	21	6:27	11:23	17:55	. . .
			1.0	0.3	1.5	. . .
	F	22	0:26	7:12	11:58	18:27
			−0.2	1.0	0.3	1.6
	S	23	1:10	7:57	12:40	19:00
			−0.4	0.9	0.3	1.8
○	S	24	1:54	8:42	13:08	19:38
			−0.5	0.8	0.3	1.9
	M	25	2:40	9:27	13:45	20:18
			−0.6	0.7	0.3	2.0
N	Tu	26	3:27	10:13	14:26	21:02
			−0.6	0.7	0.3	2.0
	W	27	4:15	11:05	15:10	21:52
			−0.5	0.7	0.3	1.9
P	Th	28	5:05	11:57	16:05	22:48
			−0.4	0.7	0.3	1.7
	F	29	5:57	12:52	17:12	23:55
			−0.3	0.8	0.3	1.5
	S	30	6:52	13:50	18:27	. . .
			−0.1	0.8	0.3	. . .

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	1:18	7:47	14:39	19:59
			1.3	0.1	1.0	0.2
E	M	2	2:45	8:52	15:26	21:27
			1.2	0.2	1.1	0.1
	Tu	3	4:10	9:43	16:17	22:38
			1.1	0.2	1.3	0.0
	W	4	5:28	10:28	17:02	23:46
			1.1	0.3	1.5	−0.2
	Th	5	6:25	11:06	17:46	. . .
			1.0	0.3	1.6	. . .
	F	6	0:48	7:17	11:47	18:30
			−0.4	0.9	0.3	1.8
	S	7	1:33	8:04	12:27	19:10
			−0.4	0.8	0.4	1.8
●	S	8	2:18	8:50	13:07	19:53
			−0.5	0.7	0.3	1.9
S	M	9	2:59	9:37	13:46	20:33
			−0.5	0.7	0.3	1.8
	Tu	10	3:38	10:20	14:26	21:12
			−0.4	0.7	0.3	1.7
	W	11	4:15	11:04	15:10	21:51
			−0.3	0.7	0.3	1.6
	Th	12	4:51	11:51	15:57	22:31
			−0.2	0.7	0.4	1.5
	F	13	5:27	12:36	16:48	23:13
			−0.1	0.8	0.4	1.3
A	S	14	6:02	13:16	17.46	. . .
			−0.1	0.9	0.4	. . .
	S	15	0:02	6:39	13:52	18:52
			1.2	0.0	1.0	0.4
☽	M	16	1:00	7:27	14:28	20:03
			1.0	0.1	1.0	0.3
E	Tu	17	2:13	8:06	15:07	21:13
			0.9	0.2	1.1	0.2
	W	18	3:40	8:45	15:45	22:08
			0.8	0.3	1.3	0.1
	Th	19	5:01	9:28	16:24	23:08
			0.8	0.3	1.4	−0.1
	F	20	6:00	10:13	17:05	. . .
			0.7	0.4	1.6	. . .
	S	21	0:04	6:55	11:01	17:49
			−0.3	0.7	0.4	1.8
	S	22	0:58	7:44	11:47	18:34
			−0.4	0.7	0.3	1.9
N	M	23	1:45	8:30	12:36	19:23
○			−0.6	0.7	0.3	2.0
	Tu	24	2:33	9:15	13:26	20:11
			−0.6	0.7	0.3	2.0
P	W	25	3:20	9:58	14:18	21:02
			−0.6	0.8	0.2	2.0
	Th	26	4:06	10:43	15:13	21:56
			−0.5	0.8	0.1	1.9
	F	27	4:50	11:28	16:13	22:55
			−0.4	0.9	0.1	1.7
	S	28	5:35	12:12	17:18	23:58
			−0.2	1.0	0.1	1.5
	S	29	6:18	12:55	18:30	. . .
			−0.1	1.1	0.1	. . .
E	M	30	1:07	7:10	13:44	19:49
☾			1.2	0.1	1.2	0.1
	Tu	31	2:27	7:55	14:39	21:03
			1.1	0.2	1.3	0.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.6 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.								FEBRUARY.								MARCH.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	7:40	17:47	21:14	22:27		P	Th	1	9:22	18:57	22:35	. . .		P	F	1	0:20	9:14	17:43	21:51	
			−0.4	1.3	1.1	1.2					−0.5	1.3	1.2	. . .					1.1	−0.3	1.1	0.9	
	Tu	2	8:32	18:43	. . .	. . .		○	F	2	0:35	10:15	19:15	23:15			S	2	2:05	10:09	17:50	22:30	
			−0.5	1.4	. . .	. . .					1.3	−0.4	1.2	1.1					1.1	−0.1	1.0	0.7	
N	W	3	9:24	19:31	. . .	. . .			S	3	2:20	11:05	19:30	. . .		○	S	3	3:35	11:00	18:00	23:12	
			−0.6	1.4	. . .	. . .					1.1	−0.3	1.1	. . .					1.0	0.0	0.9	0.6	
○ P	Th	4	10:16	20:07	. . .	. . .			S	4	0:00	3:55	11:55	19:45		E	M	4	4:52	11:50	18:16	. . .	
			−0.6	1.4	. . .	. . .					0.9	1.0	−0.2	1.0					1.0	0.2	0.8	. . .	
	F	5	11:08	20:36	. . .	. . .			M	5	0:48	5:26	12:44	20:00			Tu	5	0:00	6:07	12:41	18:30	
			−0.5	1.3	. . .	. . .					0.7	1.0	0.0	1.0					0.4	1.0	0.3	0.8	
	S	6	12:00	20:58	. . .	. . .		E	Tu	6	1:37	6:51	13:34	20:20			W	6	0:44	7:23	13:32	18:45	
			−0.4	1.2	. . .	. . .					0.6	0.9	0.3	0.9					0.3	1.0	0.5	0.8	
	S	7	2:15	8:47	12:50	21:17			W	7	2:27	8:21	14:20	20:34			Th	7	1:35	8:45	14:20	18:50	
			0.9	1.0	−0.2	1.2					0.4	0.8	0.5	0.9					0.2	1.0	0.8	0.9	
	M	8	2:45	5:43	13:43	21:33			Th	8	3:18	10:02	15:06	20:47			F	8	2:24	10:20	15:20	18:38	
			0.8	0.9	0.0	1.1					0.8	0.8	0.7	0.9					0.1	1.0	0.8	0.9	
E	Tu	9	3:33	7:46	14:31	21:50		☾	F	9	4:10	12:34	16:05	20:50			S	9	3:06	12:24	. . .	. . .	
			0.7	0.8	0.2	1.0					0.2	0.9	0.8	0.9					0.0	1.0	. . .	. . .	
	W	10	4:20	9:43	15:18	22:07			S	10	5:00	14:50	17:37	20:15		☾	S	10	3:58	13:51	. . .	. . .	
			0.5	0.7	0.4	1.0					0.1	1.0	0.9	1.0					0.0	1.1	. . .	. . .	
☾	Th	11	5:09	12:00	16:12	22:20			S	11	5:50	15:53	. . .	. . .		S	M	11	4:55	14:55	. . .	. . .	
			0.3	0.8	0.6	1.0					0.0	1.1	. . .	. . .					0.0	1.2	. . .	. . .	
	F	12	5:54	14:56	17:22	22:29			M	12	6:37	16:38	. . .	. . .		A	Tu	12	5:45	15:36	. . .	. . .	
			0.2	0.9	0.8	1.0					−0.1	1.2	. . .	. . .					−0.1	1.2	. . .	. . .	
	S	13	6:38	16:17	18:56	21:49		S	Tu	13	7:20	17:18	. . .	. . .			W	13	6:35	16:11	. . .	. . .	
			0.0	1.0	0.9	1.0					−0.2	1.3	. . .	. . .					−0.1	1.2	. . .	. . .	
	S	14	7:18	17:11	. . .	. . .		A	W	14	8:05	17:57	. . .	. . .			Th	14	7:28	16:45	. . .	. . .	
			−0.1	1.2	. . .	. . .					−0.2	1.3	. . .	. . .					−0.1	1.2	. . .	. . .	
	M	15	7:57	17:54	. . .	. . .			Th	15	8:49	18:26	. . .	. . .			F	15	8:21	17:05	22:30	. . .	
			−0.2	1.3	. . .	. . .					−0.2	1.3	. . .	. . .					−0.1	1.1	0.9	. . .	
	Tu	16	8:36	18:35	. . .	. . .			F	16	9:33	18:58	. . .	. . .			S	16	0:23	9:15	17:15	22:05	
			−0.3	1.3	. . .	. . .					−0.2	1.2	. . .	. . .					0.9	0.0	1.0	0.8	
S A	W	17	9:17	19:13	. . .	. . .		●	S	17	10:14	19:18	23:42	. . .			S	17	2:19	10:05	17:20	22:10	
			−0.3	1.4	. . .	. . .					−0.2	1.1	1.0	. . .					0.9	0.1	0.9	0.7	
	Th	18	9:49	19:52	. . .	. . .			S	18	1:48	10:56	19:18	23:40		●	M	18	3:37	10:55	17:20	22:27	
			−0.3	1.4	. . .	. . .					1.0	−0.1	1.0	0.8					1.0	0.2	0.8	0.5	
●	F	19	10:25	20:28	. . .	. . .			M	19	3:37	11:41	19:10	23:50		E	Tu	19	4:45	11:40	17:15	22:55	
			−0.3	1.3	. . .	. . .					1.0	0.0	0.9	0.7					1.1	0.3	0.7	0.3	
	S	20	11:00	20:45	. . .	. . .		E	Tu	20	5:00	12:28	19:06	. . .			W	20	5:55	12:34	17:07	23:35	
			−0.3	1.2	. . .	. . .					1.0	0.2	0.8	. . .					1.1	0.5	0.7	0.1	
	S	21	11:42	20:50	. . .	. . .			W	21	0:20	6:26	13:14	19:02			Th	21	7:08	13:27	16:56	. . .	
			−0.2	1.2	. . .	. . .					0.5	1.0	0.4	0.8					1.1	0.7	0.8	. . .	
	M	22	12:24	20:48	. . .	. . .			Th	22	1:00	7:58	14:00	18:53			F	22	0:30	8:30	14:21	16:47	
			−0.1	1.0	. . .	. . .					0.3	1.0	0.6	0.8					0.0	1.2	0.8	0.9	
	Tu	23	1:54	5:10	13:11	20:46			F	23	1:57	9:25	14:44	18:46			S	23	1:18	10:03	15:26	16:48	
			0.8	0.9	0.1	0.9					0.1	1.0	0.8	0.9					−0.2	1.2	0.9	1.0	
E	W	24	2:13	7:00	13:56	20:44			S	24	2:47	11:20	15:30	18:49			S	24	2:13	12:12	. . .	. . .	
			0.6	0.8	0.3	0.9					0.0	1.0	0.9	1.0					−0.2	1.2	. . .	. . .	
	Th	25	2:48	8:53	14:39	20:39		☽	S	25	3:50	16:20	. . .	. . .		N ☽	M	25	3:17	13:55	. . .	. . .	
			0.4	0.8	0.5	0.9					−0.2	1.1	. . .	. . .					−0.3	1.2	. . .	. . .	
	F	26	3:35	10:51	15:20	20:34			M	26	4:56	16:10	. . .	. . .			Tu	26	4:30	15:00	. . .	. . .	
			0.2	0.9	0.7	0.9					−0.3	1.2	. . .	. . .					−0.3	1.2	. . .	. . .	
☽	S	27	4:30	13:04	15:40	20:30		N	Tu	27	6:05	16:49	. . .	. . .			W	27	5:44	15:31	19:45	20:50	
			0.0	1.0	0.8	0.9					−0.3	1.2	. . .	. . .					−0.2	1.1	1.0	1.1	
	S	28	5:27	16:49	. . .	. . .			W	28	7:12	17:14	20:35	22:05		P	Th	28	6:55	16:50	20:04	23:50	
			−0.2	1.1	. . .	. . .					−0.3	1.2	1.1	1.2					−0.1	1.0	0.9	1.0	
	M	29	6:26	17:27	. . .	. . .			Th	29	8:20	17:32	21:11	. . .			F	29	8:00	15:56	20:40	. . .	
			−0.3	1.2	. . .	. . .					−0.3	1.1	1.0	. . .					0.0	1.0	0.7	. . .	
	Tu	30	7:27	18:00	. . .	. . .											S	30	1:40	9:05	16:00	21:20	
			−0.4	1.4	. . .	. . .													1.0	0.1	0.9	0.6	
N	W	31	8:25	18:31	. . .	. . .											S	31	3:09	10:02	16:13	22:00	
			−0.5	1.3	. . .	. . .													1.0	0.2	0.8	0.4	

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.6 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	4:22 1.1	10:52 0.4	16:25 0.8	22:35 0.2
	Tu	2	5:31 1.1	11:42 0.5	16:35 0.8	23:18 0.1
	W	3	6:45 1.1	12:30 0.7	16:37 0.8	23:57 0.0
	Th	4	7:56 1.1	13:45 0.8	16:00 0.8	. . . .
	F	5	0:37 0.0	9:10 1.1	. . . .	. . . .
	S	6	1:21 −0.1	10:35 1.2	. . . .	. . . .
	S	7	2:03 −0.1	11:50 1.2	. . . .	. . . .
S	M	8	2:47 −0.1	12:50 1.2	. . . .	. . . .
☾ A	Tu	9	3:40 0.0	13:38 1.2	. . . .	. . . .
	W	10	4:38 0.0	14:15 1.2	. . . .	. . . .
	Th	11	5:50 0.0	14:44 1.1	. . . .	. . . .
	F	12	6:45 0.1	15:00 1.0	20:46 0.7	. . . .
	S	13	0:12 0.8	7:45 0.2	15:08 0.9	20:42 0.6
	S	14	1:53 0.9	8:48 0.3	15:17 0.8	20:57 0.5
E	M	15	3:11 1.0	9:45 0.4	15:20 0.8	21:25 0.3
	Tu	16	4:18 1.1	10:48 0.5	15:16 0.7	21:50 0.1
●	W	17	5:26 1.2	11:40 0.7	15:10 0.8	22:25 −0.1
	Th	18	6:36 1.3	12:43 0.8	14:48 0.9	23:10 −0.2
	F	19	7:53 1.3	23:54 −0.3	. . . .	. . . .
	S	20	9:11 1.3	. . . .	. . . .	. . . .
A P	S	21	0:50 −0.4	10:46 1.3	. . . .	. . . .
	M	22	1:53 −0.3	12:06 1.3	. . . .	. . . .
	Tu	23	2:52 −0.3	12:58 1.2	. . . .	. . . .
☽	W	24	4:03 −0.2	13:33 1.1	. . . .	. . . .
	Th	25	5:15 0.0	13:49 1.0	18:10 0.8	22:55 0.9
	F	26	6:26 0.1	14:01 0.9	18:36 0.6	. . . .
	S	27	1:05 0.9	7:37 0.3	14:17 0.9	20:12 0.4
E	S	28	2:38 1.0	8:45 0.4	14:21 0.8	20:50 0.2
	M	29	4:01 1.0	9:46 0.6	14:35 0.8	21:26 0.1
	Tu	30	5:18 1.1	10:49 0.7	14:41 0.8	22:08 −0.1
MAY.						
○	W	1	6:25 1.2	11:54 0.8	12:20 0.9	22:47 −0.1
	Th	2	7:34 1.2	23:21 −0.2	. . . .	. . . .
	F	3	8:45 1.3	23:56 −0.2	. . . .	. . . .
	S	4	9:42 1.3	. . . .	. . . .	. . . .
S	S	5	0:33 −0.2	10:32 1.3	. . . .	. . . .
	M	6	1:12 −0.2	11:23 1.3	. . . .	. . . .
A	Tu	7	1:56 −0.1	11:56 1.3	. . . .	. . . .
	W	8	2:38 0.0	12:27 1.2	. . . .	. . . .
☾	Th	9	3:36 0.0	12:45 1.1	. . . .	. . . .
	F	10	4:54 0.1	13:00 1.0	19:27 0.7	23:07 0.8
	S	11	5:58 0.3	13:11 0.9	19:25 0.5	. . . .
E	S	12	1:57 0.8	7:10 0.4	13:22 0.9	19:44 0.3
	M	13	2:26 0.9	8:13 0.6	13:21 0.8	20:12 0.1
	Tu	14	3:44 1.1	9:27 0.7	13:16 0.8	20:45 −0.1
	W	15	5:54 1.2	10:39 0.8	12:56 0.9	21:26 −0.3
●	Th	16	6:09 1.3	22:08 −0.4	. . . .	. . . .
	F	17	7:21 1.4	22:55 −0.5	. . . .	. . . .
	S	18	8:27 1.4	23:45 −0.5	. . . .	. . . .
N P	S	19	9:40 1.4	. . . .	. . . .	. . . .
	M	20	0:40 −0.5	10:36 1.4	. . . .	. . . .
	Tu	21	1:37 −0.3	11:16 1.3	. . . .	. . . .
	W	22	2:39 −0.2	11:43 1.2	. . . .	. . . .
☽	Th	23	3:46 0.0	12:00 1.1	18:05 0.7	21:41 0.8
	F	24	4:46 0.2	12:18 1.0	18:35 0.5	. . . .
E	S	25	0:02 0.8	6:00 0.4	12:31 0.9	19:11 0.3
	S	26	2:06 0.9	7:06 0.6	12:42 0.9	19:47 0.1
	M	27	3:51 1.0	8:22 0.8	12:55 0.9	20:27 0.0
	Tu	28	5:18 1.1	9:52 0.9	12:37 1.0	21:09 −0.2
	W	29	6:22 1.2	21:44 −0.2	. . . .	. . . .
○	Th	30	7:19 1.3	22:20 −0.3	. . . .	. . . .
	F	31	8:10 1.3	22:54 −0.3	. . . .	. . . .
JUNE.						
S	S	1	8:51 1.4	23:27 −0.3	. . . .	. . . .
	S	2	9:33 1.4	. . . .	. . . .	. . . .
	M	3	0:04 −0.3	10:08 1.4	. . . .	. . . .
A	Tu	4	0:39 −0.2	10:34 1.3	. . . .	. . . .
	W	5	1:22 −0.1	10:51 1.2	. . . .	. . . .
	Th	6	2:06 0.0	11:01 1.2	. . . .	. . . .
☾	F	7	2:54 0.1	11:15 1.1	18:02 0.7	20:57 0.8
	S	8	4:00 0.3	11:24 1.0	18:02 0.5	23:34 0.7
E	S	9	5:10 0.5	11:29 0.9	18:25 0.3	. . . .
	M	10	1:23 0.9	6:20 0.7	11:32 0.9	18:57 0.0
	Tu	11	3:06 1.0	7:40 0.8	11:23 0.9	19:37 −0.2
	W	12	4:31 1.2	9:10 0.9	11:20 1.0	20:28 −0.4
	Th	13	5:48 1.3	21:10 −0.5	. . . .	. . . .
	F	14	6:57 1.4	22:00 −0.6	. . . .	. . . .
● N	S	15	7:55 1.4	22:57 −0.6	. . . .	. . . .
○	S	16	8:40 1.4	23:42 −0.5	. . . .	. . . .
	M	17	9:20 1.4	. . . .	. . . .	. . . .
	Tu	18	0:40 −0.4	9:52 1.3	. . . .	. . . .
	W	19	1:31 −0.2	10:13 1.2	15:56 0.9	17:32 1.0
	Th	20	2:26 0.0	10:28 1.1	16:34 0.7	20:19 0.8
☽ E	F	21	3:17 0.2	10:45 1.0	17:16 0.5	22:40 0.7
	S	22	4:13 0.4	11:00 1.0	17:57 0.3	. . . .
	S	23	0:56 0.8	5:26 0.6	11:09 0.9	18:41 0.1
	M	24	3:27 0.9	6:28 0.8	11:09 1.0	19:25 0.0
	Tu	25	4:50 1.1	8:07 1.1	10:30 1.1	20:05 −0.2
	W	26	5:48 1.2	20:47 −0.3	. . . .	. . . .
	Th	27	6:40 1.3	21:24 −0.3	. . . .	. . . .
S	F	28	7:24 1.4	22:00 −0.3	. . . .	. . . .
○	S	29	8:02 1.4	22:33 −0.3	. . . .	. . . .
	S	30	8:37 1.4	23:08 −0.3	. . . .	. . . .

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The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
A	M	1	9:08	23:43	. . . . .				Th	1	0:14	8:23	13:27	17:09			S	1	1:43	6:18	13:16	21:04	
			1.3	−0.3	. . . . .						0.0	1.0	0.8	0.9					0.6	0.8	0.1	1.0	
	Tu	2	9:28	. . . . .				E	F	2	0:56	8:20	13:46	18:54			M	2	2:30	6:12	14:10	22:47	
			1.3	. . . . .							0.1	0.9	0.6	0.9					0.8	0.9	0.0	1.1	
	W	3	0:24	9:37	. . . . .				S	3	1:37	8:19	14:24	20:34			Tu	3	3:14	6:23	15:07	. . .	
			−0.2	1.2	. . . . .						0.3	0.9	0.4	0.9					0.9	1.0	−0.2	. . .	
	Th	4	1:02	9:41	. . . . .				S	4	2:18	8:12	15:02	22:16		☾	W	4	2:00	4:20	6:35	16:16	
			−0.1	1.1	. . . . .						0.5	0.9	0.2	0.9					1.1	1.0	1.1	−0.3	
	F	5	1:47	9:46	15:07	19:34		☾	M	5	2:56	8:05	15:52	. . .		N	Th	5	3:52	5:52	7:20	17:28	
			0.1	1.0	0.6	0.7					0.7	0.9	0.0	. . .					1.2	1.0	1.1	−0.3	
E	S	6	2:36	9:50	16:26	21:50			Tu	6	0:21	3:56	8:05	16:56			F	6	4:21	7:13	8:05	18:37	
			0.3	0.9	0.5	0.8					1.0	0.9	1.0	−0.1					1.2	1.1	1.2	−0.3	
☾	S	7	3:18	9:49	16:54	23:52			W	7	3:21	17:57	. . . . .				S	7	4:49	7:46	9:59	19:43	
			0.5	0.9	0.3	0.8					1.1	−0.3	. . . . .						1.2	1.0	1.1	−0.3	
	M	8	4:11	9:44	17:37	. . .			Th	8	5:22	6:35	8:55	18:55			S	8	5:00	8:33	12:10	20:45	
			0.7	0.9	0.0	. . .					1.2	1.1	1.2	−0.4					1.1	1.0	1.1	−0.2	
	Tu	9	1:56	5:25	9:47	18:25		N	F	9	5:45	7:53	9:33	19:55		P	M	9	5:04	9:20	13:50	21:42	
			1.0	0.9	1.0	−0.2					1.3	1.1	1.2	−0.4					1.0	0.9	1.1	−0.1	
	W	10	4:33	6:58	9:44	19:15			S	10	6:14	9:09	10:56	20:55		●	Tu	10	5:10	9:51	15:20	22:36	
			1.2	1.0	1.1	−0.3					1.3	1.1	1.2	−0.4					0.9	0.7	1.1	0.0	
	Th	11	5:43	8:28	9:57	20:07			S	11	6:34	9:45	12:45	21:51		E	W	11	5:24	10:34	16:35	23:30	
			1.3	1.1	1.2	−0.5					1.2	1.0	1.2	−0.4					0.9	0.5	1.1	0.2	
	F	12	6:33	21:02	. . . . .			P ●	M	12	6:51	10:30	14:09	22:45			Th	12	5:34	11:22	17:50	. . .	
			1.4	−0.6	. . . . .						1.2	1.0	1.1	−0.3					0.8	0.3	1.1	. . .	
N	S	13	7:14	21:56	. . . . .				Tu	13	6:55	11:12	15:51	23:35			F	13	0:20	5:49	12:04	18:07	
			1.4	−0.6	. . . . .						1.1	0.9	1.1	−0.1					0.4	0.8	0.2	1.1	
● P	S	14	7:49	22:49	. . . . .				W	14	7:11	11:56	17:13	. . .			S	14	1:14	6:08	12:56	20:29	
			1.4	−0.5	. . . . .						1.0	0.7	1.0	. . .					0.6	0.8	0.1	1.0	
	M	15	8:15	12:28	14:04	23:40		E	Th	15	0:25	7:23	12:55	18:42			S	15	2:12	6:07	13:46	22:00	
			1.3	1.1	1.2	−0.4					0.1	0.9	0.5	1.0					0.7	0.8	0.0	1.0	
	Tu	16	8:31	13:08	15:51	. . .			F	16	1:16	7:45	13:45	20:00			M	16	3:17	5:46	14:35	23:54	
			1.2	1.0	1.1	. . .					0.3	0.9	0.4	0.9					0.8	0.9	0.0	1.1	
	W	17	0:32	8:44	13:52	17:39			S	17	2:07	7:57	14:36	21:36			Tu	17	15:29	. . . . .			
			−0.2	1.1	0.8	0.9					0.5	0.9	0.2	0.9					0.0	. . . . .			
	Th	18	1:28	9:00	14:39	19:19			S	18	2:53	8:12	15:30	23:46		☽ ♋	W	18	1:20	16:25	. . . . .		
			0.0	1.0	0.6	0.9					0.6	0.9	0.1	0.9					1.1	0.0	. . . . .		
E	F	19	2:15	9:14	15:31	21:04		☽	M	19	3:54	8:11	16:25	. . .			Th	19	2:20	17:28	. . . . .		
			0.2	1.0	0.5	0.8					0.8	0.9	0.0	. . .					1.2	0.0	. . . . .		
☽	S	20	3:02	9:30	16:28	23:10			Tu	20	2:06	5:25	7:34	17:22			F	20	3:05	18:19	. . . . .		
			0.4	0.9	0.3	0.8					1.0	0.8	0.9	0.0					1.2	0.0	. . . . .		
	S	21	3:51	9:43	17:15	. . .			W	21	3:24	18:12	. . . . .			A	S	21	3:41	19:10	. . . . .		
			0.6	0.9	0.1	. . .					1.1	−0.1	. . . . .						1.2	0.0	. . . . .		
	M	22	2:08	5:05	9:45	18:05		S	Th	22	4:12	19:04	. . . . .				S	22	4:08	20:04	. . . . .		
			0.9	0.8	1.0	0.0					1.2	−0.1	. . . . .						1.1	0.0	. . . . .		
	Tu	23	3:54	6:23	9:10	18:54			F	23	4:56	18:50	. . . . .				M	23	4:28	10:04	13:10	21:00	
			1.0	0.9	1.0	−0.1					1.2	−0.2	. . . . .						1.1	0.8	0.9	0.1	
	W	24	4:52	19:36	. . . . .				S	24	5:29	20:36	. . . . .				Tu	24	4:39	9:52	14:28	21:45	
			1.2	−0.2	. . . . .						1.2	−0.2	. . . . .						1.0	0.7	0.9	0.2	
	Th	25	5:38	20:21	. . . . .			A	S	25	6:00	21:21	. . . . .				W	25	4:45	9:55	15:39	22:37	
			1.2	−0.3	. . . . .						1.2	−0.1	. . . . .						0.8	0.6	1.0	0.3	
S	F	26	6:19	21:02	. . . . .				M	26	6:26	22:04	. . . . .			E ○	Th	26	4:47	10:15	16:42	23:25	
			1.3	−0.3	. . . . .						1.2	−0.1	. . . . .						0.8	0.4	1.0	0.4	
	S	27	6:55	21:40	. . . . .			○	Tu	27	6:47	11:19	14:30	22:48			F	27	4:38	10:35	17:46	. . .	
			1.3	−0.3	. . . . .						1.1	0.8	0.9	0.0					0.7	0.3	1.1	. . .	
○ A	S	28	7:28	22:16	. . . . .				W	28	6:46	11:18	15:50	23:26			S	28	0:19	4:22	11:06	18:56	
			1.3	−0.3	. . . . .						1.0	0.8	0.9	0.1					0.6	0.7	0.1	1.1	
	M	29	8:02	22:54	. . . . .			E	Th	29	6:45	11:27	17:10	. . .			S	29	1:15	4:03	11:48	20:15	
			1.3	−0.2	. . . . .						0.9	0.6	1.0	. . .					0.7	0.8	−0.1	1.2	
	Tu	30	8:25	23:36	. . . . .				F	30	0:11	6:36	11:51	18:17			M	30	2:22	3:54	12:40	21:41	
			1.2	−0.1	. . . . .						0.2	0.8	0.5	1.0					0.5	0.9	−0.2	1.2	
	W	31	8:27	13:28	15:23	. . .			S	31	0:57	6:29	12:26	19:40									
			1.1	0.9	1.0	. . .					0.4	0.8	0.3	1.0									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.6 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3rd quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	3:06	4:20	13:31	23:59
			0.9	1.0	—0.2	1.2
	W	2	14:32	. . . . .		
			—0.3	. . . . .		
N ☾	Th	3	1:36	15:43	. . . . .	
			1.2	—0.2	. . . . .	
	F	4	2:33	16:58	. . . . .	
			1.2	—0.2	. . . . .	
	S	5	3:06	6:47	8:46	18:12
			1.1	0.9	1.0	—0.1
	S	6	3:15	7:16	11:38	19:21
			1.1	0.9	1.0	0.0
P	M	7	3:16	7:52	13:26	20:25
			1.0	0.7	1.0	0.1
	Tu	8	3:28	8:35	14:54	21:27
			0.9	0.5	1.0	0.3
E	W	9	3:34	9:21	16:10	22:23
			0.8	0.3	1.1	0.5
●	Th	10	3:46	10:01	17:23	23:18
			0.8	0.2	1.1	0.6
	F	11	4:00	10:45	18:35	. . .
			0.8	0.0	1.2	. . .
	S	12	0:12	4:00	11:26	19:53
			0.7	0.8	0.1	1.2
	S	13	1:23	3:47	12:09	21:08
			0.8	0.9	—0.1	1.2
	M	14	12:56	22:28	. . . . .	
			—0.1	1.2	. . . . .	
S	Tu	15	13:39	23:38	. . . . .	
			—0.1	1.2	. . . . .	
	W	16	14:26	. . . . .		
			—0.1	. . . . .		
☽	Th	17	0:30	15:17	. . . . .	
			1.2	0.0	. . . . .	
	F	18	1:12	16:16	. . . . .	
			1.2	0.0	. . . . .	
A	S	19	1:47	17:14	. . . . .	
			1.2	0.1	. . . . .	
	S	20	2:12	18:17	. . . . .	
			1.1	0.2	. . . . .	
	M	21	2:29	8:37	12:39	19:21
			1.0	0.7	0.8	0.3
	Tu	22	2:38	8:33	14:00	20:25
			0.9	0.6	0.8	0.4
E	W	23	2:52	8:44	15:18	21:25
			0.8	0.4	0.9	0.5
	Th	24	2:47	9:05	16:16	22:22
			0.8	0.2	1.1	0.6
○	F	25	2:36	9:31	17:22	23:23
			0.8	0.0	1.2	0.8
	S	26	2:12	10:05	18:27	. . .
			0.8	—0.1	1.3	. . .
	S	27	0:40	1:36	10:43	19:41
			0.9	1.0	—0.3	1.3
	M	28	11:30	20:56	. . . . .	
			—0.4	1.3	. . . . .	
	Tu	29	12:20	22:19	. . . . .	
			—0.4	1.3	. . . . .	
N	W	30	13:16	23:36	. . . . .	
			—0.4	1.3	. . . . .	
	Th	31	14:19	. . . . .		
			—0.3	. . . . .		

NOVEMBER.

Moon	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	0:19	15:24	. . . . .	
			1.2	—0.2	. . . . .	
	S	2	0:46	16:37	. . . . .	
			1.1	0.0	. . . . .	
P	S	3	1:00	6:37	10:12	17:51
			1.0	0.7	0.8	0.1
	M	4	1:15	7:04	12:32	19:00
			0.9	0.6	0.9	0.3
E	Tu	5	1:27	7:41	14:13	20:11
			0.9	0.4	0.9	0.5
	W	6	1:41	8:20	15:43	21:20
			0.8	0.2	1.0	0.6
	Th	7	1:49	9:00	17:01	22:24
			0.8	0.0	1.1	0.8
●	F	8	1:51	9:41	18:13	23:42
			0.8	—0.1	1.2	0.9
	S	9	1:20	10:23	19:23	. . .
			0.9	—0.2	1.3	. . .
	S	10	11:02	20:27	. . . . .	
			—0.3	1.3	. . . . .	
	M	11	11:41	21:23	. . . . .	
			—0.3	1.3	. . . . .	
S	Tu	12	12:20	22:14	. . . . .	
			—0.3	1.3	. . . . .	
	W	13	13:00	23:00	. . . . .	
			—0.2	1.3	. . . . .	
	Th	14	13:40	23:30	. . . . .	
			—0.1	1.3	. . . . .	
	F	15	14:23	23:57	. . . . .	
			0.0	1.2	. . . . .	
A ☽	S	16	15:14	. . . . .		
			0.1	. . . . .		
	S	17	0:14	16:16	. . . . .	
			1.1	0.2	. . . . .	
	M	18	0:31	7:32	11:06	17:27
			1.0	0.6	0.7	0.3
E	Tu	19	0:43	7:21	12:59	18:37
			0.9	0.5	0.7	0.5
	W	20	0:58	7:35	14:24	19:45
			0.9	0.3	0.9	0.6
	Th	21	0:50	7:58	15:44	21:05
			0.8	0.1	1.0	0.8
	F	22	0:37	8:30	16:50	22:25
			0.9	—0.1	1.2	0.9
	S	23	0:15	9:07	18:00	. . .
			0.9	—0.3	1.3	. . .
○	S	24	9:48	19:10	. . . . .	
			—0.4	1.4	. . . . .	
	M	25	10:33	20:21	. . . . .	
			—0.5	1.4	. . . . .	
N	Tu	26	11:21	21:18	. . . . .	
			—0.5	1.4	. . . . .	
	W	27	12:18	22:12	. . . . .	
			—0.5	1.4	. . . . .	
P	Th	28	13:10	22:47	. . . . .	
			—0.4	1.3	. . . . .	
	F	29	14:06	23:12	. . . . .	
			—0.2	1.2	. . . . .	
	S	30	15:06	23:23	. . . . .	
			0.0	1.1	. . . . .	

DECEMBER.

Moon	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	5:29	8:45	16:12	23:41
			0.7	0.8	0.2	1.0
E	M	2	6:02	11:22	17:20	23:53
			0.5	0.8	0.4	0.9
	Tu	3	6:40	13:25	18:30	. . .
			0.3	0.8	0.6	. . .
	W	4	0:01	7:20	15:24	19:48
			0.9	0.1	1.0	0.8
	Th	5	0:04	8:01	16:55	. . .
			0.9	—0.1	1.1	. . .
	F	6	8:45	18:08	. . . . .	
			—0.2	1.2	. . . . .	
	S	7	9:26	19:02	. . . . .	
			—0.3	1.3	. . . . .	
●	S	8	10:06	19:53	. . . . .	
			—0.4	1.4	. . . . .	
S	M	9	10:43	20:36	. . . . .	
			—0.4	1.4	. . . . .	
	Tu	10	11:19	21:13	. . . . .	
			—0.3	1.4	. . . . .	
	W	11	11:53	21:46	. . . . .	
			—0.3	1.4	. . . . .	
	Th	12	12:31	22:14	. . . . .	
			—0.2	1.3	. . . . .	
	F	13	13:10	22:29	. . . . .	
			—0.1	1.2	. . . . .	
A	S	14	13:51	22:42	. . . . .	
			0.0	1.1	. . . . .	
	S	15	14:37	22:51	. . . . .	
			0.1	1.1	. . . . .	
☽	M	16	6:06	8:37	15:30	23:02
			0.6	0.7	0.8	1.0
E	Tu	17	5:56	11:22	16:30	23:05
			0.5	0.7	0.5	0.9
	W	18	6:17	13:14	17:50	23:00
			0.3	0.8	0.7	0.9
	Th	19	6:45	15:05	19:10	22:49
			0.1	1.0	0.9	1.0
	F	20	7:23	16:33	20:43	22:38
			—0.1	1.1	0.9	1.0
	S	21	8:04	17:43	. . . . .	
			—0.3	1.3	. . . . .	
	S	22	8:51	18:46	. . . . .	
			—0.5	1.4	. . . . .	
N ○	M	23	9:39	19:40	. . . . .	
			—0.6	1.4	. . . . .	
	Tu	24	10:28	20:28	. . . . .	
			—0.6	1.4	. . . . .	
P	W	25	11:20	20:55	. . . . .	
			—0.5	1.3	. . . . .	
	Th	26	12:13	21:23	. . . . .	
			—0.4	1.3	. . . . .	
	F	27	13:07	21:40	. . . . .	
			—0.3	1.2	. . . . .	
	S	28	3:09	5:22	14:01	21:54
			0.8	0.9	—0.1	1.1
	S	29	3:49	7:43	14:55	22:07
			0.7	0.8	0.2	1.0
E ☾	M	30	4:35	9:51	15:50	22:20
			0.5	0.7	0.4	0.9
	Tu	31	5:24	12:07	16:48	22:31
			0.3	0.8	0.6	0.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.6 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Central Standard, 90th meridian. W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	0:30 2.9	7:35 0.4	12:40 2.5	19:37 0.0
	Tu	2	1:28 3.2	8:30 0.5	13:20 2.6	20:25 —0.2
N	W	3	2:18 3.4	9:18 0.6	14:00 2.8	21:10 —0.4
○ P	Th	4	3:00 3.6	10:00 0.8	14:37 3.1	21:54 —0.4
	F	5	3:47 3.6	10:40 1.1	15:12 3.3	22:38 —0.3
	S	6	4:20 3.5	11:20 1.4	15:50 3.4	23:20 —0.1
	S	7	4:56 3.4	11:58 1.6	16:25 3.5	. . . . .
	M	8	0:06 0.1	5:30 3.1	12:32 1.7	17:00 3.4
	Tu	9	0:52 0.4	6:05 2.8	13:10 1.7	17:44 3.2
E	W	10	1:42 0.7	6:40 2.5	13:58 1.7	18:33 2.9
☾	Th	11	2:45 0.9	7:22 2.2	14:52 1.5	19:33 2.6
	F	12	3:53 1.1	8:15 2.0	16:05 1.2	20:55 2.3
	S	13	5:10 1.1	9:30 1.9	17:21 0.9	22:58 2.2
	S	14	6:20 1.0	10:58 1.9	18:27 0.5	. . . . .
	M	15	0:33 2.3	7:18 0.8	12:02 2.2	19:20 0.2
	Tu	16	1:20 2.6	8:03 0.7	12:54 2.5	20:06 —0.1
S A	W	17	1:56 2.9	8:43 0.7	13:36 2.8	20:48 —0.2
	Th	18	2:30 3.2	9:20 0.6	14:15 3.2	21:25 —0.3
●	F	19	3:00 3.4	9:53 0.7	14:50 3.5	22:00 —0.2
	S	20	3:33 3.6	10:27 0.8	15:25 3.7	22:34 —0.1
	S	21	4:05 3.7	11:00 0.9	16:00 3.8	23:07 0.0
	M	22	4:40 3.7	11:30 1.0	16:34 3.7	23:40 0.2
	Tu	23	5:15 3.5	12:00 1.1	17:12 3.6	. . . . .
E	W	24	0:18 0.3	5:55 3.3	12:30 1.2	17:53 3.4
	Th	25	1:08 0.6	6:30 2.9	13:10 1.2	18:40 3.0
	F	26	2:05 0.8	7:18 2.5	14:15 1.2	19:40 2.6
☽	S	27	3:33 1.0	8:16 2.1	15:50 1.1	21:06 2.4
	S	28	5:17 1.0	9:40 1.8	17:25 0.8	23:20 2.4
	M	29	6:45 0.9	11:20 1.9	18:40 0.4	. . . . .
	Tu	30	1:04 2.8	7:46 0.8	12:30 2.2	19:35 0.0
N	W	31	1:55 3.1	8:34 0.7	13:15 2.5	20:23 —0.3

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	2:33 3.4	9:12 0.7	13:52 2.9	21:08 —0.5
○	F	2	3:03 3.6	9:45 0.9	14:28 3.4	21:45 —0.6
	S	3	3:34 3.6	10:20 1.0	15:00 3.6	22:24 —0.5
	S	4	4:00 3.6	10:46 1.1	15:38 3.8	23:00 —0.3
	M	5	4:27 3.4	11:17 1.2	16:10 3.8	23:35 0.0
E	Tu	6	4:58 3.2	11:35 1.2	16:45 3.7	. . . . .
	W	7	0:11 0.4	5:20 3.0	11:55 1.1	17:22 3.4
	Th	8	0:48 0.8	5:48 2.6	11:55 1.1	18:04 3.0
☾	F	9	1:37 1.1	6:20 2.3	11:20 1.1	18:53 2.5
	S	10	2:55 1.4	7:00 2.0	11:40 1.1	. . . . .
	S	11	0:06 2.1	4:50 1.5	8:04 1.8	16:55 1.0
	M	12	1:34 2.0	6:22 1.3	10:00 1.7	18:18 0.6
S	Tu	13	1:45 2.3	7:17 1.0	12:04 2.0	19:13 0.3
A	W	14	1:48 2.6	7:57 0.8	12:55 2.4	19:57 0.0
	Th	15	2:00 3.0	8:32 0.7	13:32 2.9	20:34 —0.2
	F	16	2:20 3.4	9:02 0.5	14:05 3.3	21:08 —0.3
	S	17	2:44 3.6	9:33 0.5	14:35 3.7	21:38 —0.3
●	S	18	3:12 3.8	10:00 0.5	15:10 3.9	22:10 —0.3
	M	19	3:42 3.9	10:27 0.5	15:42 4.0	22:40 —0.2
E	Tu	20	4:13 3.8	10:50 0.6	16:15 4.0	23:12 0.0
	W	21	4:43 3.6	11:14 0.7	16:50 3.8	23:45 0.3
	Th	22	5:18 3.3	11:30 0.7	17:28 3.5	. . . . .
	F	23	0:27 0.6	5:50 2.8	11:38 0.8	18:12 3.1
	S	24	1:22 1.0	6:28 2.4	11:38 0.9	19:08 2.6
☽	S	25	3:17 1.4	7:12 1.9	11:58 1.0	20:40 2.3
	M	26	5:32 1.4	8:24 1.7	17:10 0.8	. . . . .
N	Tu	27	1:22 2.6	6:55 1.2	11:00 1.7	18:30 0.4
	W	28	1:50 3.0	7:45 1.0	12:38 2.1	19:28 0.0
	Th	29	2:10 3.3	8:20 0.9	13:18 2.6	20:08 —0.4

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	2:30 3.5	8:50 0.8	13:40 3.1	20:48 —0.5
	S	2	2:47 3.6	9:20 0.8	14:12 3.5	21:25 —0.6
○	S	3	3:07 3.6	9:45 0.7	14:45 3.8	22:00 —0.5
E	M	4	3:28 3.5	10:10 0.7	15:18 4.0	22:33 —0.2
	Tu	5	3:52 3.4	10:30 0.6	15:52 4.0	23:05 0.1
	W	6	4:15 3.2	10:50 0.6	16:27 3.8	23:34 0.5
	Th	7	4:42 3.0	11:00 0.6	17:03 3.4	. . . . .
	F	8	0:04 0.9	5:00 2.7	10:55 0.6	17:40 3.0
	S	9	0:30 1.3	5:38 2.5	10:50 0.7	18:27 2.5
☾	S	10	0:54 1.6	6:15 2.2	11:00 0.9	. . . . .
S	M	11	0:16 2.0	4:35 1.7	7:10 1.9	11:23 1.2
	Tu	12	1:32 2.2	6:12 1.5	9:15 1.7	17:55 0.8
A	W	13	1:37 2.5	6:58 1.2	12:22 2.1	18:50 0.4
	Th	14	1:35 2.8	7:34 0.9	12:45 2.5	19:30 0.1
	F	15	1:37 3.1	8:04 0.6	13:15 3.0	20:05 —0.1
	S	16	1:53 3.4	8:34 0.4	13:43 3.4	20:40 —0.3
	S	17	2:17 3.7	9:00 0.3	14:15 3.7	21:10 —0.4
●	M	18	2:45 3.8	9:30 0.3	14:48 4.0	21:43 —0.3
E	Tu	19	3:13 3.8	9:54 0.2	15:20 4.1	22:15 —0.2
	W	20	3:43 3.7	10:18 0.3	15:55 4.0	22:48 0.1
	Th	21	4:13 3.5	10:40 0.3	16:32 3.8	23:25 0.5
	F	22	4:46 3.1	10:56 0.4	17:10 3.5	. . . . .
	S	23	0:07 0.9	5:17 2.7	10:57 0.6	17:57 3.1
	S	24	1:26 1.4	5:48 2.3	11:00 0.7	18:55 2.6
N	M	25	3:30 1.6	6:20 2.0	11:10 1.0	. . . . .
☽	Tu	26	0:48 2.5	5:40 1.7	11:38 1.8	16:50 0.8
	W	27	1:20 2.8	6:45 1.5	10:12 1.8	18:05 0.4
P	Th	28	1:40 3.1	7:20 1.3	12:10 2.2	18:57 0.0
	F	29	1:52 3.3	7:50 1.0	12:44 2.7	19:42 —0.2
	S	30	2:00 3.3	8:17 0.8	13:17 3.2	20:20 —0.4
	S	31	2:10 3.3	8:43 0.6	13:48 3.6	20:57 —0.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Mean Local Civil, for the meridian 43° 10′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	2:27 3.3	9:08 0.4	14:22 3.8	21:30 −0.2
	Tu	2	2:48 3.4	9:32 0.3	15:00 3.9	22:05 0.0
	W	3	3:13 3.3	9:55 0.2	15:32 3.8	22:35 0.4
	Th	4	3:41 3.2	10:20 0.2	16:07 3.6	23:08 0.8
	F	5	4:10 3.0	10:40 0.3	16:45 3.3	23:40 1.1
	S	6	4:40 2.8	10:50 0.5	17:35 2.9	. . . . .
	☾	7	0:30 1.5	5:13 2.6	10:42 0.7	18:13 2.5
S	M	8	0:10 1.8	5:58 2.8	10:50 1.0	19:18 2.2
☾ A	Tu	9	0:30 1.7	6:52 2.0	15:55 1.0	. . . . .
	W	10	0:50 2.4	5:27 1.6	8:40 1.9	17:13 0.8
	Th	11	0:52 2.6	6:18 1.2	11:15 2.2	18:10 0.5
	F	12	0:44 2.8	6:54 0.9	12:04 2.6	18:50 0.3
	S	13	0:53 3.1	7:25 0.6	12:40 3.0	19:30 0.0
	☾	14	1:15 3.4	7:56 0.4	13:15 3.3	20:05 −0.2
E	M	15	1:40 3.5	8:27 0.2	13:48 3.6	20:44 −0.3
	Tu	16	2:12 3.6	8:55 0.1	14:25 3.8	21:20 −0.2
●	W	17	2:43 3.6	9:25 0.0	15:00 3.9	21:56 0.0
	Th	18	3:15 3.4	9:54 0.0	15:40 3.9	22:38 0.4
	F	19	3:47 3.2	10:23 0.1	16:20 3.7	23:24 0.8
	S	20	4:20 3.0	10:54 0.3	17:04 3.4	. . . . .
	☾	21	0:25 1.3	4:50 2.8	11:35 0.5	17:54 3.0
N P	M	22	1:50 1.7	5:26 2.4	13:06 0.7	19:00 2.7
	Tu	23	3:21 1.9	6:08 2.2	14:52 0.8	. . . . .
☽	W	24	0:15 2.8	4:53 1.9	7:15 2.0	16:17 0.7
	Th	25	0:47 2.9	6:00 1.7	9:12 2.0	17:28 0.4
	F	26	1:06 3.0	6:35 1.4	11:10 2.4	18:25 0.2
	S	27	1:10 3.0	7:05 1.1	12:05 2.8	19:11 0.0
E	☾	28	1:12 3.0	7:35 0.8	12:46 3.1	19:50 0.0
	M	29	1:24 3.0	8:04 0.5	13:25 3.4	20:28 0.0
	Tu	30	1:44 3.0	8:35 0.2	14:00 3.5	21:06 0.2
MAY.						
○	W	1	2:10 3.1	9:02 0.0	14:40 3.6	21:40 0.4
	Th	2	2:40 3.1	9:33 −0.1	15:17 3.5	22:17 0.7
	F	3	3:12 3.1	10:08 0.0	16:54 3.3	22:58 1.0
	S	4	3:46 3.0	10:44 0.2	16:35 3.1	23:44 1.3
S	☾	5	4:22 2.9	11:30 0.5	17:18 2.9	. . . . .
	M	6	0:45 1.6	5:00 2.7	12:34 0.7	18:06 2.7
A	Tu	7	2:00 1.8	5:50 2.5	13:52 0.9	19:10 2.5
	W	8	3:17 1.8	6:48 2.3	15:10 0.9	20:35 2.5
☾	Th	9	4:25 1.6	8:10 2.2	16:15 0.8	22:32 2.6
	F	10	5:20 1.3	9:50 2.3	17:14 0.6	23:20 2.8
	S	11	6:00 1.0	11:04 2.6	18:04 0.4	23:54 3.0
E	☾	12	6:40 0.7	11:56 2.8	18:49 0.2	. . . . .
	M	13	0:30 3.1	7:16 0.4	12:40 3.2	19:33 0.0
	Tu	14	1:05 3.2	7:52 0.1	13:23 3.4	20:23 0.0
	W	15	1:40 3.2	8:28 0.0	14:04 3.6	21:03 0.1
●	Th	16	2:15 3.2	9:05 −0.1	14:47 3.7	21:50 0.4
	F	17	2:48 3.1	9:42 −0.1	15:31 3.7	22:41 0.7
	S	18	3:26 3.0	10:25 0.0	16:17 3.6	23:35 1.2
N P	☾	19	4:00 2.9	11:15 0.1	17:05 3.4	. . . . .
	M	20	0:38 1.6	4:38 2.8	12:12 0.3	18:00 3.1
	Tu	21	1:43 1.9	5:16 2.7	13:19 0.5	19:04 2.8
	W	22	2:50 2.0	6:08 2.6	14:29 0.6	23:26 2.8
☽	Th	23	3:53 2.0	7:04 2.4	15:40 0.6	. . . . .
	F	24	0:08 2.7	4:18 1.8	8:29 2.4	16:43 0.5
E	S	25	0:10 2.6	5:33 1.4	10:05 2.5	17:42 0.4
	☾	26	0:00 2.5	6:13 1.1	11:27 2.7	18:33 0.4
	M	27	0:07 2.5	6:50 0.7	12:16 2.9	19:20 0.4
	Tu	28	0:35 2.6	7:26 0.3	13:02 3.0	20:04 0.4
	W	29	1:05 2.7	8:04 0.0	13:45 3.1	20:46 0.5
○	Th	30	1:40 2.8	8:44 −0.1	14:27 3.2	21:28 0.7
	F	31	2:15 2.9	9:25 −0.2	15:05 3.2	22:09 0.9
JUNE.						
S	S	1	2:54 3.0	10:07 −0.1	15:47 3.2	22:54 1.1
	☾	2	3:20 3.1	10:54 0.1	16:25 3.2	23:42 1.3
	M	3	4:12 3.1	11:40 0.3	17:11 3.1	. . . . .
A	Tu	4	0:38 1.5	4:55 3.0	12:28 0.5	17:55 3.0
	W	5	1:27 1.6	5:40 2.9	13:22 0.7	18:47 2.9
	Th	6	2:24 1.6	6:32 2.7	14:20 0.8	19:44 2.8
☾	F	7	3:19 1.5	7:34 2.6	15:17 0.8	20:52 2.7
	S	8	4:12 1.3	8:44 2.5	16:16 0.7	21:55 2.7
E	☾	9	5:05 1.0	10:01 2.6	17:14 0.5	22:55 2.7
	M	10	5:52 0.9	11:13 2.7	18:13 0.4	23:45 2.7
	Tu	11	6:35 0.4	12:10 2.9	19:08 0.3	. . . . .
	W	12	0:30 2.7	7:22 0.1	13:05 3.1	20:04 0.4
	Th	13	1:10 2.8	8:09 −0.1	13:55 3.3	21:00 0.5
	F	14	1:54 2.9	8:56 −0.2	14:45 3.5	21:52 0.7
● N	S	15	2:38 2.9	9:43 −0.2	15:32 3.6	22:43 1.0
P	☾	16	3:10 3.0	10:31 −0.2	16:20 3.6	23:32 1.3
	M	17	3:50 3.1	11:21 −0.1	17:06 3.4	. . . . .
	Tu	18	0:22 1.6	4:28 3.1	12:12 0.1	17:50 3.2
	W	19	1:10 1.8	5:07 3.1	13:03 0.3	18:37 3.0
	Th	20	2:58 1.9	5:51 3.0	14:00 0.5	19:25 2.7
☽ E	F	21	2:48 1.9	6:46 2.8	14:56 0.6	20:16 2.4
	S	22	3:37 1.6	7:48 2.6	15:56 0.8	21:09 2.2
	☾	23	4:29 1.3	9:07 2.5	17:00 0.8	22:07 2.1
	M	24	5:21 1.0	10:38 2.4	18:01 0.8	23:01 2.1
	Tu	25	6:11 0.6	11:56 2.5	18:58 0.8	23:49 2.2
	W	26	7:02 0.2	12:52 2.6	19:50 0.8	. . . . .
	Th	27	0:35 2.4	7:51 0.0	13:41 2.8	20:37 0.8
	F	28	1:15 2.6	8:34 −0.2	14:31 3.0	21:20 0.9
S ○	S	29	2:00 2.9	9:21 −0.2	15:00 3.2	22:00 0.9
	☾	30	2:42 3.1	10:03 −0.1	15:38 3.3	22:41 1.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Mean Local Civil, for the meridan 43° 10′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
A	M	1	3:20	10:42	16:15	23:18			Th	1	4:20	11:28	17:00	23:51			S	1	5:08	12:00	17:30	23:35	
			3.3	0.0	3.4	1.2					3.7	0.2	3.6	1.0					3.5	0.6	2.9	0.8	
	Tu	2	4:01	11:23	16:52	. . .		E	F	2	4:56	12:00	17:33	. . .			M	2	5:52	12:55	18:10	23:42	
			3.4	0.2	3.4	. . .					3.6	0.3	3.3	. . .					3.1	1.0	2.5	0.9	
	W	3	0:00	4:41	12:01	17:30			S	3	0:21	5:35	12:41	18:11			Tu	3	6:49	14:46	18:55	. . .	
			1.3	3.4	0.3	3.4					1.1	3.4	0.5	3.0					2.7	1.4	2.1	. . .	
	Th	4	0:41	5:21	12:42	18:09			S	4	1:57	6:20	13:33	18:55		☾	W	4	2:49	8:15	16:45	20:06	
			1.4	3.3	0.5	3.2					1.1	3.0	0.8	2.6					1.0	2.3	1.5	1.8	
	F	5	1:24	6:08	13:28	18:56			M	5	1:54	7:15	14:49	19:47		N	Th	5	4:39	12:52	18:13	22:06	
			1.4	3.1	0.6	3.0					1.1	2.7	1.0	2.3					0.8	2.5	1.3	1.8	
E	S	6	2:12	6:54	14:20	19:46		☾	Tu	6	3:17	8:32	16:30	20:56			F	6	5:54	13:18	13:07	23:47	
			1.3	2.9	0.7	2.7					1.0	2.4	1.1	2.0					0.4	3.0	1.1	2.2	
☾	S	7	3:05	7:58	15:25	20:45			W	7	4:48	10:30	18:00	22:30			S	7	6:50	13:42	19:50	. . .	
			1.2	2.7	0.7	2.5					0.8	2.3	1.1	2.0					0.0	3.3	1.0	. . .	
	M	8	4:05	9:09	16:39	21:55			Th	8	6:02	12:33	19:13	23:50			S	8	0:35	7:37	14:02	20:22	
			1.0	2.5	0.8	2.3					0.4	2.7	1.0	2.2					2.6	—0.4	3.5	0.9	
	Tu	9	5:11	10:37	17:53	23:02		N	F	9	7:04	13:31	20:04	. . .		P	M	9	1:12	8:20	14:23	20:53	
			0.8	2.5	0.7	2.3					0.1	3.1	0.9	. . .					3.1	—0.6	3.6	0.8	
	W	10	6:11	12:01	19:00	. . .			S	10	0:45	7:53	14:12	20:46			Tu	10	1:46	8:58	14:45	21:21	
			0.5	2.7	0.7	. . .					2.5	—0.3	3.4	0.9					3.5	—0.6	3.6	0.8	
	Th	11	0:04	7:10	13:10	20:05			S	11	1:27	8:40	14:47	21:24		●	W	11	2:20	9:33	15:09	21:47	
			2.4	0.1	3.0	0.7					2.9	—0.5	3.6	0.9					3.8	—0.5	3.5	0.7	
	F	12	1:56	8:00	14:00	21:00		P ●	M	12	2:03	9:20	15:17	21:58		E	Th	12	2:55	10:09	15:31	22:11	
			2.5	—0.1	3.3	0.8					3.2	—0.6	3.7	1.0					3.9	—0.2	3.4	0.7	
N	S	13	1:34	8:52	14:50	21:44			Tu	13	2:41	10:00	15:46	22:30			F	13	3:30	10:42	15:56	22:33	
			2.8	—0.3	3.5	0.9					3.6	—0.5	3.7	1.1					3.9	0.1	3.2	0.7	
●	S	14	2:10	9:35	15:32	22:30			W	14	3:27	10:40	16:12	23:00			S	14	4:05	11:15	16:20	22:45	
P			3.0	—0.4	3.7	1.1					3.8	—0.3	3.5	1.2					3.7	0.5	3.0	0.7	
	M	15	2:58	10:20	16:12	23:08		E	Th	15	3:55	11:17	16:38	23:27			S	15	4:43	11:50	16:50	23:20	
			3.2	—0.4	3.7	1.3					3.8	0.0	3.2	1.2					3.4	1.0	2.8	0.7	
	Tu	16	3:35	11:05	16:45	23:46			F	16	4:27	11:54	17:05	23:51			M	16	5:25	12:29	17:20	23:45	
			3.4	—0.3	3.5	1.5					3.7	0.3	3.0	1.2					2.9	1.4	2.5	0.8	
	W	17	4:10	11:48	17:21	. . .			S	17	5:05	12:36	17:33	23:46			Tu	17	6:11	13:00	17:58	23:52	
			3.5	0.0	3.3	. . .					3.4	0.7	2.7	1.1					2.4	1.6	2.2	1.0	
	Th	18	0:22	4:50	12:31	17:55			S	18	5:46	13:26	18:08	23:20		☽	W	18	7:19	14:52	18:55	. . .	
			1.6	3.5	0.2	3.0					3.0	1.1	2.4	1.1		S			2.0	1.8	2.1	. . .	
E	F	19	0:56	5:32	13:19	18:27		☽	M	19	6:36	14:37	18:41	. . .			Th	19	4:14	13:12	17:42	20:50	
			1.6	3.3	0.5	2.7					2.6	1.4	2.1	. . .					0.9	2.4	1.6	1.8	
	S	20	1:34	6:16	14:10	19:04			Tu	20	2:39	7:42	16:20	19:35			F	20	5:30	13:20	18:30	23:42	
			1.5	3.0	0.8	2.4					1.1	2.1	1.6	1.9					0.6	2.6	1.3	2.1	
☽	S	21	2:22	7:12	15:18	19:46			W	21	4:25	13:28	17:50	21:14		A	S	21	6:24	13:22	19:05	. . .	
			1.4	2.7	1.1	2.1					0.9	2.1	1.4	1.8					0.3	2.8	1.0	. . .	
	M	22	3:27	8:21	16:30	20:45		S	Th	22	5:47	13:37	18:50	23:19			S	22	0:19	7:05	13:20	19:37	
			1.2	2.8	1.2	2.0					0.6	2.4	1.2	2.0					2.6	0.0	3.1	0.7	
	Tu	23	4:41	10:07	17:46	22:02			F	23	6:45	13:41	19:31	. . .			M	23	0:50	7:41	13:33	20:06	
			0.9	2.1	1.2	1.9					0.2	2.6	1.0	. . .					3.0	—0.2	3.4	0.5	
	W	24	5:54	12:26	18:58	23:22			S	24	0:24	7:30	13:46	20:06			Tu	24	1:19	8:25	13:54	20:35	
			0.6	2.2	1.1	2.1					2.4	0.0	2.9	0.8					3.4	—0.3	3.6	0.3	
	Th	25	6:54	13:16	19:43	. . .		A	S	25	1:05	8:10	14:03	20:40			W	25	1:50	8:45	14:20	21:02	
			0.2	2.5	1.0	. . .					2.9	—0.2	3.3	0.7					3.7	—0.3	3.8	0.2	
S	F	26	0:25	7:45	13:50	20:25			M	26	1:42	8:45	14:26	21:10		E ○	Th	26	2:22	9:15	14:50	21:27	
			2.4	0.0	2.8	0.9					3.3	—0.3	3.5	0.6					3.9	—0.3	3.8	0.2	
	S	27	1:12	8:28	14:18	21:05		○	Tu	27	2:10	9:19	14:53	21:40			F	27	2:45	9:46	15:20	21:52	
			2.7	—0.2	3.1	0.8					3.6	—0.3	3.7	0.5					4.0	—0.2	3.7	0.2	
	S	28	1:54	9:08	14:51	21:40			W	28	2:47	9:49	15:22	22:06			S	28	3:31	10:18	15:51	22:14	
			3.1	—0.2	3.4	0.8					3.8	—0.3	3.8	0.6					3.9	0.1	3.5	0.3	
○	M	29	2:33	9:45	15:22	22:13			Th	29	3:20	10:20	15:52	22:33			S	29	4:09	10:52	16:52	22:32	
A			3.4	—0.2	3.6	0.8					3.9	—0.1	3.8	0.6					3.7	0.5	3.2	0.4	
	Tu	30	3:10	10:19	15:53	22:48		E	F	30	3:54	10:50	16:20	22:56			M	30	4:49	11:33	16:56	22:38	
			3.6	—0.1	3.7	0.9					3.9	0.0	3.6	0.7					3.4	0.9	2.8	0.6	
	W	31	3:40	10:55	16:35	23:21			S	31	4:30	11:20	16:55	23:18									
			3.7	0.0	3.7	1.0					3.7	0.3	3.3	0.7									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Mean Local Civil, for the meridian 43° 10′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	5:35	12:54	17:32	22:50
			3.1	1.4	2.5	0.8
	W	2	6:36	15:00	18:15	. . .
			2.6	1.8	2.2	. . .
N ☾	Th	3	2:45	12:20	16:54	19:27
			0.9	2.5	1.7	1.9
	F	4	4:24	12:49	18:03	21:45
			0.7	2.9	1.5	1.9
	S	5	5:34	13:11	18:47	23:33
			0.3	3.2	1.3	2.3
	S	6	6:28	13:25	19:18	. . .
			0.0	3.3	1.1	. . .
P	M	7	0:15	7:12	13:36	19:48
			2.8	−0.3	3.4	0.9
	Tu	8	0:50	7:52	13:48	20:14
			3.2	−0.5	3.3	0.7
E	W	9	1:24	8:32	14:06	20:42
			3.5	−0.4	3.3	0.5
●	Th	10	2:00	9:04	14:28	21:05
			3.8	−0.3	3.3	0.3
	F	11	2:32	9:38	14:52	21:30
			3.9	0.0	3.2	0.3
	S	12	3:10	10:10	15:18	21:52
			3.7	0.4	3.1	0.3
	S	13	3:47	10:40	15:45	22:11
			3.5	0.8	3.0	0.3
	M	14	4:25	11:10	16:18	22:45
			3.2	1.3	2.8	0.5
	Tu	15	5:06	11:32	16:52	23:42
			2.8	1.6	2.6	0.8
S	W	16	5:54	12:20	17:32	. . .
			2.4	1.8	2.4	. . .
☽	Th	17	2:12	12:22	15:50	18:36
			1.0	2.3	1.9	2.1
	F	18	3:40	12:37	17:05	20:26
			1.0	2.5	1.6	2.0
A	S	19	4:56	12:44	17:50	23:00
			0.5	2.7	1.3	2.3
	S	20	5:47	12:38	18:27	23:45
			0.5	2.9	1.0	2.6
	M	21	6:30	12:38	19:00	. . .
			0.2	3.1	0.7	. . .
	Tu	22	0:20	7:06	12:55	19:30
			3.0	0.0	3.3	0.4
E	W	23	0:50	7:42	13:20	20:00
			3.3	−0.2	3.5	0.2
	Th	24	1:25	8:15	13:48	20:30
			3.6	−0.3	3.5	0.0
○	F	25	2:00	8:48	14:18	20:57
			3.8	−0.2	3.6	0.0
	S	26	2:35	9:28	14:50	21:25
			3.8	0.0	3.5	0.0
	S	27	3:14	10:02	15:24	21:54
			3.7	0.3	3.3	0.1
	M	28	3:54	10:46	15:55	22:24
			3.7	0.8	3.1	0.3
	Tu	29	4:40	11:45	16:30	23:07
			3.4	1.3	2.8	0.5
N	W	30	5:30	13:14	17:08	. . .
			3.0	1.7	2.6	. . .
	Th	31	0:48	6:35	14:52	17:55
			0.7	2.7	2.0	2.3
NOVEMBER.						
	F	1	2:32	11:54	16:20	19:00
			0.8	2.8	1.9	2.2
☾	S	2	3:55	12:25	17:24	20:50
			0.6	3.0	1.7	2.2
P	S	3	5:03	12:46	18:06	22:44
			0.4	3.1	1.5	2.4
	M	4	5:57	12:55	18:38	23:40
			0.1	3.0	1.2	2.8
E	Tu	5	6:44	13:00	19:10	. . .
			−0.1	3.0	0.8	. . .
	W	6	0:23	7:27	13:08	19:40
			3.1	−0.1	3.0	0.5
	Th	7	1:00	8:05	13:28	20:07
			3.3	−0.1	3.0	0.2
●	F	8	1:40	8:42	13:52	20:37
			3.5	0.1	3.0	0.0
	S	9	2:16	9:16	14:20	21:08
			3.5	0.4	3.1	−0.1
	S	10	2:55	9:52	14:50	21:43
			3.5	0.7	3.1	0.0
	M	11	3:32	10:30	15:25	22:22
			3.3	1.0	3.1	0.2
S	Tu	12	4:10	11:14	16:00	23:10
			3.1	1.4	3.0	0.4
	W	13	4:56	12:15	16:40	. . .
			2.9	1.7	2.9	. . .
	Th	14	0:22	5:45	13:35	17:27
			0.7	2.6	1.9	2.7
	F	15	1:43	6:47	14:53	18:25
			0.9	2.4	1.9	2.5
A ☽	S	16	3:00	8:16	16:00	19:47
			0.9	2.4	1.7	2.3
	S	17	4:05	11:38	16:57	21:27
			0.8	2.5	1.4	2.3
	M	18	5:00	11:22	17:40	22:42
			0.7	2.7	1.1	2.5
E	Tu	19	5:45	11:45	18:20	23:38
			0.5	2.8	0.7	2.8
	W	20	6:30	12:14	18:55	. . .
			0.2	3.0	0.4	. . .
	Th	21	0:20	7:12	12:46	19:30
			3.1	0.0	3.1	0.1
	F	22	1:02	7:53	13:18	20:04
			3.3	0.0	3.2	0.0
	S	23	1:38	8:35	13:50	20:40
			3.5	0.1	3.2	−0.2
○	S	24	2:24	9:18	14:30	21:20
			3.6	0.3	3.2	−0.2
	M	25	3:07	10:06	15:05	22:00
			3.7	0.6	3.2	−0.1
N	Tu	26	3:52	10:58	15:40	22:48
			3.6	1.1	3.1	0.1
	W	27	4:38	11:55	16:15	23:45
			3.4	1.5	3.0	0.3
P	Th	28	5:30	13:00	17:00	. . .
			3.2	1.8	2.9	. . .
	F	29	0:50	6:30	14:12	17:42
			0.5	2.9	2.0	2.8
	S	30	2:04	11:12	15:20	18:40
			0.6	2.7	2.0	2.6
DECEMBER.						
☾	S	1	3:15	11:48	16:20	19:55
			0.6	2.7	1.9	2.5
E	M	2	4:23	12:23	17:12	21:30
			0.5	2.6	1.6	2.5
	Tu	3	5:23	12:13	17:53	22:58
			0.4	2.5	1.2	2.6
	W	4	6:18	12:06	18:32	. . .
			0.3	2.4	0.8	. . .
	Th	5	0:00	7:05	12:25	19:10
			2.8	0.3	2.4	0.4
	F	6	0:45	7:50	12:53	19:48
			3.0	0.4	2.6	0.1
	S	7	1:30	8:32	13:25	20:26
			3.1	0.5	2.7	−0.2
●	S	8	2:10	9:10	14:00	21:08
			3.2	0.6	2.9	−0.2
S	M	9	2:50	9:50	14:35	21:48
			3.3	0.8	3.1	−0.1
	Tu	10	3:30	10:30	15:15	22:34
			3.4	1.1	3.2	0.0
	W	11	4:08	11:12	15:55	23:20
			3.2	1.3	3.3	0.3
	Th	12	4:48	12:00	16:35	. . .
			3.1	1.5	3.2	. . .
	F	13	0:07	5:30	12:50	17:18
			0.5	3.0	1.6	3.1
A	S	14	1:00	6:16	13:46	18:05
			0.7	2.8	1.7	2.9
	S	15	2:00	7:10	14:46	19:02
			0.8	2.7	1.6	2.7
☽	M	16	3:00	8:12	15:45	20:12
			0.9	2.5	1.5	2.5
E	Tu	17	4:00	9:23	16:48	21:30
			0.8	2.5	1.2	2.4
	W	18	5:02	10:33	17:35	22:50
			0.7	2.5	0.9	2.5
	Th	19	6:00	11:30	18:23	23:53
			0.5	2.5	0.5	2.7
	F	20	6:55	12:17	19:10	. . .
			0.3	2.6	0.2	. . .
	S	21	0:44	7:47	13:00	19:54
			3.0	0.3	2.8	−0.1
	S	22	1:40	8:37	13:40	20:38
			3.4	0.4	2.9	−0.2
	M	23	2:24	9:25	14:17	21:22
			3.5	0.5	3.1	−0.3
N ○	Tu	24	3:10	10:12	14:55	22:06
			3.7	0.8	3.2	−0.3
P	W	25	3:54	10:58	15:33	22:52
			3.7	1.1	3.4	−0.2
	Th	26	4:37	11:42	16:10	23:40
			3.6	1.4	3.4	0.0
	F	27	5:20	12:28	16:47	. . .
			3.4	1.7	3.4	. . .
	S	28	0:30	6:02	13:15	17:28
			0.2	3.1	1.9	3.2
	S	29	1:26	6:48	14:05	18:14
			0.4	2.7	1.9	3.0
E ☾	M	30	2:27	7:33	14:58	19:10
			0.8	2.4	1.8	2.7
	Tu	31	3:35	8:27	15:58	20:21
			0.8	2.1	1.5	2.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day: a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Mean Local Civil, for the meridian 43° 10′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:13 2.2	9:00 0.5	14:57 1.5	20:55 —0.1
	Tu	2	4:15 2.1	9:55 0.4	16:23 1.8	22:11 —0.1
N	W	3	5:16 2.1	10:49 0.2	17:30 2.1	23:25 —0.1
○ P	Th	4	6:10 2.0	11:41 0.0	18:32 2.5	. . . . .
	F	5	0:37 —0.1	7:03 1.9	12:30 —0.2	19:30 2.8
	S	6	1:43 —0.1	7:54 1.8	13:19 —0.4	20:27 3.0
	S	7	2:46 —0.1	8:44 1.6	14:06 —0.5	21:23 3.2
	M	8	3:47 0.0	9:32 1.5	14:56 —0.6	22:20 3.2
E	Tu	9	4:50 0.1	10:23 1.4	15:46 —0.6	23:19 3.2
	W	10	5:55 0.3	11:16 1.3	16:39 —0.5	. . . . .
☾	Th	11	0:17 3.1	7:02 0.4	12:12 1.2	17:36 —0.4
	F	12	1:19 2.9	8:13 0.5	13:14 1.2	18:40 —0.3
	S	13	2:21 2.7	9:20 0.6	14:18 1.3	19:51 —0.1
	S	14	3:21 2.4	10:14 0.7	15:24 1.4	21:11 0.1
	M	15	4:22 2.2	10:58 0.7	16:22 1.6	22:32 0.2
	Tu	16	5:15 1.9	11:29 0.7	17:21 1.8	23:47 0.3
S A	W	17	6:01 1.7	11:50 0.6	18:14 2.0	. . . . .
	Th	18	0:55 0.4	6:44 1.5	12:02 0.5	19:02 2.1
●	F	19	1:50 0.5	7:16 1.3	12:16 0.3	19:44 2.2
	S	20	2:27 0.6	7:43 1.1	12:34 0.2	20:22 2.3
	S	21	2:51 0.7	8:00 1.1	13:00 0.0	21:00 2.3
	M	22	3:00 0.8	7:55 1.1	13:32 —0.2	22:31 2.3
	Tu	23	3:16 0.9	7:34 1.2	14:08 —0.3	22:03 2.3
E	W	24	3:38 0.8	7:58 1.3	14:48 —0.4	22:36 2.3
	Th	25	4:10 0.8	8:39 1.4	15:34 —0.4	23:14 2.3
	F	26	4:50 0.8	9:30 1.5	16:24 —0.4	. . . . .
☽	S	27	0:00 2.3	5:35 0.7	10:28 1.5	17:20 —0.4
	S	28	0:48 2.2	6:23 0.6	11:36 1.6	18:20 —0.3
	M	29	1:46 2.1	7:18 0.6	12:58 1.6	19:31 —0.2
	Tu	30	2:58 2.0	8:16 0.5	14:40 1.8	20:48 —0.1
N	W	31	3:54 1.9	9:14 0.3	16:03 2.1	22:04 0.0

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	4:55 1.8	10:10 0.2	17:12 2.4	23:21 0.0
○	F	2	5:50 1.7	11:10 0.0	18:18 2.7	. . . . .
	S	3	0:32 0.0	6:45 1.6	12:02 —0.2	19:17 2.9
	S	4	1:37 0.0	7:35 1.6	12:57 —0.4	20:14 3.1
	M	5	2:37 0.0	8:23 1.6	13:50 —0.6	21:10 3.2
E	Tu	6	3:34 0.1	9:10 1.5	14:40 —0.6	22:06 3.2
	W	7	4:30 0.3	10:00 1.5	15:35 —0.7	23:02 3.1
	Th	8	5:25 0.4	10:49 1.5	16:33 —0.6	. . . . .
☾	F	9	0:00 2.8	6:19 0.6	11:42 1.5	17:29 —0.4
	S	10	0:57 2.6	7:18 0.7	12:41 1.6	18:33 —0.2
	S	11	1:55 2.3	8:02 0.8	13:42 1.6	19:45 0.0
	M	12	2:53 2.0	8:54 0.8	14:46 1.7	21:04 0.2
S	Tu	13	3:50 1.7	9:26 0.8	15:47 1.8	22:24 0.3
A	W	14	4:41 1.5	10:00 0.7	16:47 1.9	23:43 0.4
	Th	15	5:27 1.3	10:25 0.6	17:41 2.0	. . . . .
	F	16	0:57 0.5	6:05 1.2	10:54 0.5	18:30 2.1
	S	17	1:41 0.6	6:43 1.1	11:21 0.3	19:10 2.2
A	S	18	1:56 0.7	7:00 1.1	11:54 0.1	19:51 2.2
	M	19	2:00 0.8	7:25 1.1	12:30 0.0	20:25 2.3
E	Tu	20	2:13 0.8	7:34 1.2	13:12 —0.2	21:00 2.3
	W	21	2:35 0.8	7:44 1.3	13:53 —0.3	21:33 2.3
	Th	22	3:04 0.7	8:15 1.5	14:38 —0.4	22:09 2.3
	F	23	3:38 0.6	8:55 1.6	15:27 —0.4	22:53 2.2
	S	24	4:15 0.6	9:42 1.7	16:20 —0.4	23:37 2.1
☽	S	25	5:00 0.5	10:34 1.8	17:16 —0.3	. . . . .
	M	26	0:26 2.0	5:45 0.5	11:44 1.9	18:20 —0.2
N	Tu	27	1:28 1.8	6:38 0.5	13:00 2.0	19:30 —0.1
	W	28	2:30 1.7	7:35 0.4	14:30 2.1	20:48 0.0
	Th	29	3:35 1.5	8:35 0.3	15:50 2.3	22:07 0.1

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:37 1.5	9:37 0.1	17:00 2.6	23:25 0.1
	S	2	5:34 1.4	10:40 0.0	18:04 2.8	. . . . .
○	S	3	0:38 0.1	6:29 1.4	11:42 —0.3	19:04 3.0
E	M	4	1:33 0.1	7:18 1.5	12:40 —0.4	20:00 3.1
	Tu	5	2:27 0.2	8:05 1.6	13:37 —0.5	20:55 3.0
	W	6	3:15 0.3	8:48 1.6	14:33 —0.6	21:50 2.9
	Th	7	4:01 0.4	9:39 1.7	15:27 —0.6	22:42 2.7
	F	8	4:42 0.5	10:27 1.8	16:24 —0.5	23:36 2.4
	S	9	5:21 0.6	11:19 1.9	17:28 —0.3	. . . . .
☾	S	10	0:29 2.1	5:56 0.7	12:12 1.9	18:24 —0.1
S	M	11	1:28 1.8	6:30 0.7	13:10 1.9	19:32 0.1
	Tu	12	2:16 1.5	7:08 0.7	14:08 2.0	20:49 0.3
A	W	13	3:11 1.2	7:31 0.7	15:10 2.0	22:15 0.5
	Th	14	3:58 1.1	8:07 0.6	16:08 2.0	23:46 0.6
	F	15	4:38 1.0	8:48 0.5	17:02 2.1	. . . . .
	S	16	0:55 0.7	5:20 1.0	9:36 0.4	17:49 2.1
	S	17	0:56 0.7	5:54 1.0	10:25 0.2	18:33 2.2
●	M	18	1:00 0.8	6:22 1.1	11:16 0.1	19:10 2.2
E	Tu	19	1:10 0.7	6:50 1.2	12:06 —0.1	19:48 2.2
	W	20	1:34 0.6	7:20 1.4	12:56 —0.2	20:25 2.2
	Th	21	2:00 0.6	7:50 1.6	13:45 —0.3	21:05 2.2
	F	22	2:34 0.5	8:28 1.7	14:40 —0.4	21:42 2.2
	S	23	3:10 0.4	9:10 1.9	15:26 —0.4	22:22 2.1
	S	24	3:50 0.4	10:00 2.0	16:22 —0.3	23:15 1.9
N ☽	M	25	4:30 0.3	10:53 2.1	17:20 —0.2	. . . . .
	Tu	26	0:08 1.7	5:16 0.3	11:58 2.3	18:25 —0.1
	W	27	1:06 1.5	6:06 0.3	13:10 2.3	19:40 0.1
P	Th	28	2:12 1.3	7:00 0.2	14:25 2.5	21:00 0.2
	F	29	3:18 1.2	8:05 0.2	15:40 2.6	22:22 0.2
	S	30	4:22 1.2	9:10 0.1	16:48 2.7	23:36 0.2
	S	31	5:20 1.2	10:20 —0.1	17:50 2.8	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Buenos Aires Mean Local Civil, for the meridian 58° 22′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	0:40 0.2	6:08 1.3	11:27 −0.2	18:50 2.9
	Tu	2	1:30 0.2	7:00 1.5	12:30 −0.3	19:46 2.9
	W	3	2:12 0.3	7:48 1.7	13:32 −0.4	20:38 2.7
	Th	4	2:50 0.4	8:34 1.8	14:27 −0.5	21:30 2.5
	F	5	3:25 0.4	9:20 2.0	15:24 −0.4	22:18 2.3
	S	6	3:54 0.5	10:06 2.1	16:18 −0.3	23:05 1.9
	S	7	4:20 0.5	10:53 2.2	17:15 −0.1	23:52 1.6
S	M	8	4:46 0.5	11:43 2.2	18:14 0.2	. . . . .
☾ A	Tu	9	0:37 1.3	5:08 0.5	12:36 2.2	19:18 0.4
	W	10	1:21 1.1	5:33 0.4	13:30 2.2	20:30 0.6
	Th	11	2:05 0.9	6:05 0.4	14:25 2.1	22:40 0.7
	F	12	2:50 0.8	6:46 0.3	15:20 2.1	23:05 0.7
	S	13	3:33 0.8	7:38 0.3	16:12 2.1	23:20 0.8
	S	14	4:21 0.8	8:40 0.3	17:02 2.1	23:36 0.8
E	M	15	5:00 1.0	9:42 0.2	17:45 2.2	23:55 0.7
	Tu	16	5:42 1.2	10:44 0.1	18:30 2.2	. . . . .
●	W	17	0:24 0.6	6:23 1.4	11:43 0.0	19:12 2.2
	Th	18	0:56 0.5	7:05 1.6	12:40 −0.2	19:52 2.2
	F	19	1:30 0.3	7:48 1.8	13:35 −0.2	20:35 2.2
	S	20	2:06 0.2	8:33 2.0	14:30 −0.3	21:20 2.0
	S	21	2:44 0.1	9:18 2.3	15:26 −0.3	22:06 1.9
N P	M	22	3:23 0.1	10:10 2.4	16:25 −0.2	22:56 1.7
	Tu	23	4:07 0.1	11:04 2.6	17:28 −0.1	23:50 1.4
☽	W	24	4:50 0.0	12:05 2.6	18:37 0.0	. . . . .
	Th	25	0:50 1.2	5:38 0.0	13:12 2.7	19:55 0.2
	F	26	1:55 1.1	6:34 0.1	14:23 2.7	21:20 0.3
	S	27	3:00 1.0	7:42 0.0	15:33 2.8	22:40 0.3
E	S	28	4:06 1.0	8:52 0.0	16:38 2.8	23:46 0.3
	M	29	5:02 1.2	10:08 0.0	17:40 2.8	. . . . .
	Tu	30	0:37 0.3	5:58 1.3	11:20 −0.1	18:38 2.7

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:18 0.3	6:47 1.6	12:27 −0.2	19:30 2.6
	Th	2	1:50 0.4	7:36 1.8	13:28 −0.2	20:20 2.3
	F	3	2:20 0.4	8:20 2.0	14:25 −0.2	21:06 2.1
	S	4	2:48 0.4	9:04 2.2	15:20 −0.1	21:47 1.8
	S	5	3:04 0.4	9:50 2.3	16:12 0.0	22:28 1.5
	M	6	3:23 0.3	10:35 2.4	17:04 0.3	23:03 1.2
A	Tu	7	3:44 0.2	11:20 2.4	17:55 0.4	23:35 1.0
	W	8	4:08 0.2	12:05 2.3	18:47 0.6	23:58 0.8
☾	Th	9	4:37 0.1	12:50 2.3	. . . . .	. . . . .
	F	10	5:13 0.1	13:43 2.2	. . . . .	. . . . .
	S	11	6:00 0.1	14:30 2.2	. . . . .	. . . . .
E	S	12	6:58 0.1	15:20 2.1	21:40 0.8	. . . . .
	M	13	0:27 0.9	8:00 0.1	16:10 2.1	22:17 0.7
	Tu	14	3:53 1.0	9:05 0.1	17:08 2.2	22:55 0.6
	W	15	5:00 1.3	10:17 0.0	17:47 2.2	23:37 0.4
●	Th	16	5:55 1.6	11:23 −0.1	18:35 2.2	. . . . .
	F	17	0:20 0.3	6:45 1.8	12:28 −0.1	19:20 2.1
	S	18	1:00 0.1	7:35 2.1	13:27 −0.2	20:08 2.0
N P	S	19	1:40 0.0	8:25 2.4	14:28 −0.2	20:55 1.9
	M	20	2:20 −0.1	9:15 2.6	15:26 −0.2	21:43 1.7
	Tu	21	3:02 −0.2	10:08 2.8	16:28 −0.1	22:35 1.5
	W	22	3:45 −0.2	11:04 2.9	17:35 0.0	23:27 1.3
☽	Th	23	4:33 −0.2	12:05 2.9	18:48 0.2	. . . . .
	F	24	0:26 1.1	5:20 −0.2	13:10 2.9	20:10 0.3
E	S	25	1:32 1.0	6:21 −0.1	14:17 2.9	21:33 0.3
	S	26	2:38 1.0	7:28 −0.1	15:24 2.8	22:45 0.4
	M	27	3:44 1.0	8:46 0.0	16:28 2.7	23:41 0.4
	Tu	28	4:45 1.2	10:04 0.0	17:27 2.6	. . . . .
	W	29	0:25 0.4	5:42 1.5	11:20 0.0	18:23 2.4
○	Th	30	0:55 0.4	6:38 1.7	12:30 0.0	19:12 2.2
	F	31	1:22 0.4	7:21 2.0	13:32 0.0	19:56 2.0

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	1:42 0.4	8:06 2.2	14.27 0.1	20.37 1.7
	S	2	2:02 0.3	8:50 2.3	15.18 0.2	21.15 1.4
	M	3	2:15 0.2	9:32 2.4	16.07 0.4	21.43 1.2
A	Tu	4	2:33 0.1	10:15 2.5	16:50 0.6	22:04 1.0
	W	5	2:55 0.0	10:55 2.4	17:25 0.7	21:28 0.9
	Th	6	3:25 −0.1	11:34 2.4	17:58 0.8	20:36 1.0
☾	F	7	4:00 −0.2	12:13 2.3	18:18 0.9	21:05 1.1
	S	8	4:40 −0.2	12:52 2.2	18:52 0.9	21:50 1.1
E	S	9	5:30 −0.2	13:37 2.2	19:33 0.9	22:58 1.1
	M	10	6:24 −0.1	14:28 2.1	20:22 0.8	. . . . .
	Tu	11	0:25 1.1	7:28 0.0	15:20 2.1	21:15 0.7
	W	12	2:40 1.2	8:40 0.0	16:17 2.1	22:05 0.5
	Th	13	4:18 1.5	9:52 0.0	17:10 2.1	22:55 0.3
	F	14	5.24 1.8	11:05 0.0	18:08 2.1	23:42 0.1
● N	S	15	6:23 2.1	12:14 −0.1	18:54 2.0	. . . . .
P	S	16	0:30 0.0	7:18 2.4	13:20 −0.1	19:44 1.9
	M	17	1:10 −0.2	8:12 2.7	14:20 −0.1	20:32 1.7
	Tu	18	1:57 −0.3	9:06 2.9	15:23 −0.1	21:20 1.6
	W	19	2:44 −0.4	10:00 3.1	16:25 0.0	22:12 1.4
	Th	20	3:30 −0.5	11:00 3.1	17:32 0.1	23:04 1.2
☽ E	F	21	4:20 −0.5	12:00 3.1	18:42 0.3	. . . . .
	S	22	0:02 1.1	5:15 −0.4	13:02 3.0	20:00 0.4
	S	23	1:04 1.1	6:16 −0.3	14:07 2.9	21:15 0.5
	M	24	2:11 1.1	7:25 −0.2	15:10 2.7	22:20 0.5
	Tu	25	3:18 1.2	8:43 −0.1	16:15 2.5	23:13 0.5
	W	26	4:20 1:4	10:04 0:0	17:11 2:3	23:53 0.5
	Th	27	5:18 1.7	11:22 0.1	18:03 2.1	. . . . .
	F	28	0:22 0.5	6:13 1.9	12:34 0.1	18:50 1.8
S ○	S	29	0:43 0.5	7:03 2.1	13:37 0.2	19:32 1.6
	S	30	1:04 0.4	7:50 2.3	14:30 0.3	20:07 1.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Buenos Aires Mean Local Civil for the meridian 58° 22′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	1:18 0.2	8:35 2.4	15:18 0.5	20:37 1.2
	Tu	2	1:35 0.1	9:15 2.4	15:55 0.6	20:57 1.0
	W	3	1:55 0.0	9:58 2.4	16:17 0.8	20:56 1.0
	Th	4	2:21 −0.2	10:30 2.4	16:30 0.9	19:48 1.1
	F	5	2:55 −0.3	11:04 2.3	16:47 0.9	20:14 1.2
E	S	6	3:35 −0.3	11:38 2.3	17:14 0.9	20:57 1.3
☾	S	7	4:20 −0.3	12:12 2.2	17:50 0.9	21:50 1.3
	M	8	5:08 −0.3	12:52 2.2	18:35 0.8	22:57 1.3
	Tu	9	6:05 −0.2	13:42 2.1	19:26 0.7	. . . . .
	W	10	0:20 1.4	7:10 −0.1	14:40 2.0	20:21 0.6
	Th	11	2:02 1.5	8:20 0.0	15:40 2.0	21:19 0.4
	F	12	3:43 1.7	9:36 0.0	16:38 1.9	22:20 0.3
N	S	13	4:57 2.0	10:50 0.0	17:35 1.9	23:06 0.0
● P	S	14	6:05 2.3	12:02 −0.1	18:30 1.8	. . . . .
	M	15	0:00 −0.2	7:00 2.6	13:10 −0.1	19:20 1.7
	Tu	16	0:50 −0.3	7:58 2.9	14:15 0.0	20:10 1.6
	W	17	1:38 −0.5	8:55 3.1	15:15 0.0	21:00 1.5
	Th	18	2:28 −0.6	9:50 3.2	16:16 0.1	21:50 1.5
E	F	19	3:20 −0.7	10:48 3.2	17:16 0.3	22:40 1.4
	S	20	4:13 −0.6	11:46 3.1	18:20 0.4	23:37 1.3
☽	S	21	5:11 −0.5	12:48 2.9	19:25 0.5	. . . . .
	M	22	0:37 1.3	6:15 −0.4	13:50 2.7	20:30 0.6
	Tu	23	1:43 1.4	7:25 −0.2	14:50 2.4	21:30 0.7
	W	24	2:50 1.5	8:44 −0.1	15:52 2.2	22:20 0.7
	Th	25	3:53 1.7	10:07 0.1	16:50 1.9	23:00 0.7
S	F	26	4:58 1.9	11:27 0.2	17:40 1.7	23:30 0.6
	S	27	5:50 2.0	12:42 0.3	18:26 1.5	23:53 0.5
	S	28	6:43 2.2	13:44 0.4	19:04 1.3	. . . . .
○ A	M	29	0:15 0.3	7:30 2.3	14:35 0.5	19:35 1.2
	Tu	30	0:34 0.2	8:12 2.4	15:13 0.7	20:00 1.1
	W	31	0:58 0.0	8:50 2.4	15:23 0.8	20:13 1.1

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	1:24 −0.1	9:25 2.3	15:25 0.9	19:50 1.1
E	F	2	2:00 −0.2	10:00 2.3	15:42 0.9	19:40 1.2
	S	3	2:35 −0.3	10:28 2.2	15:55 0.9	20:20 1.4
	S	4	3:20 −0.4	11:00 2.2	16:28 0.8	21:04 1.5
	M	5	4:04 −0.4	11:35 2.1	17:08 0.7	21:58 1.6
☾	Tu	6	4:56 −0.3	12:17 2.0	17:48 0.7	23:00 1.7
	W	7	5:56 −0.2	13:10 2.0	18:38 0.6	. . . . .
	Th	8	0:15 1.7	6:58 −0.1	14:08 1.8	19:34 0.5
A	F	9	1:46 1.8	8:10 0.0	15:10 1.8	20:34 0.3
	S	10	3:18 2.0	9:27 0.0	16:15 1.7	21:33 0.2
	S	11	4:37 2.3	10:44 0.0	17:14 1.6	22:32 0.0
P ●	M	12	5:44 2.6	11:58 0.0	18:10 1.6	23:31 −0.2
	Tu	13	6:47 2.8	13:05 0.0	19:02 1.6	. . . . .
	W	14	0:29 −0.4	7:45 3.0	14:05 0.1	19:58 1.6
E	Th	15	1:22 −0.6	8:41 3.1	15:00 0.1	20:44 1.6
	F	16	2:16 −0.7	9:38 3.2	15:58 0.2	21:30 1.6
	S	17	3:12 −0.7	10:33 3.1	16:48 0.4	22:20 1.6
	S	18	4:06 −0.7	11:31 2.9	17:41 0.5	23:15 1.7
☽	M	19	5:08 −0.6	12:28 2.6	18:32 0.6	. . . . .
	Tu	20	0:11 1.7	6:14 −0.4	13:27 2.3	19:24 0.7
	W	21	1:18 1.8	7:25 −0.2	14:28 2.0	20:11 0.7
S	Th	22	2:18 1.8	8:45 0.0	15:25 1.7	21:00 0.7
	F	23	3:24 1.9	10:06 0.2	16:21 1.5	21:40 0.7
	S	24	4:24 2.0	11:35 0.3	17:12 1.3	22:17 0.6
A	S	25	5:22 2.1	12:53 0.4	17:55 1.2	22:51 0.5
	M	26	6:16 2.2	13:52 0.5	18:35 1.1	23:18 0.3
○	Tu	27	7:08 2.2	14:30 0.6	19:05 1.0	23:51 0.2
	W	28	7:44 2.3	14:37 0.8	19:30 1.1	. . . . .
E	Th	29	0:24 0.0	8:20 2.2	14:26 0.8	19:43 1.2
	F	30	1:04 −0.1	8:52 2.2	14:32 0.8	19:51 1.3
	S	31	1:42 −0.2	9:26 2.2	14:49 0.8	20:06 1.4

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	2:26 −0.3	9:55 2.1	15:20 0.7	20:42 1.6
	M	2	3:09 −0.3	10:30 2.1	15:50 0.6	21:20 1.7
	Tu	3	3:57 −0.3	11:06 2.0	16:30 0.5	22:10 1.9
☾	W	4	4:51 −0.3	11:50 1.9	17:11 0.4	23:12 1.9
N	Th	5	5:49 −0.2	12:45 1.7	18:01 0.4	. . . . .
	F	6	0:21 2.0	6:56 0.0	13:45 1.6	18:55 0.3
	S	7	1:41 2.1	8:07 0.1	14:49 1.4	19:58 0.2
	S	8	3:08 2.3	9:26 0.1	15:57 1.4	20:56 0.1
P	M	9	4:20 2.5	10:46 0.1	16:56 1.4	22:03 0.0
●	Tu	10	5:28 2.7	12:00 0.1	17:53 1.4	23:05 −0.2
E	W	11	6:32 2.9	13:00 0.1	18:46 1.5	. . . . .
	Th	12	0:10 −0.4	7:31 3.0	13:55 0.1	19:37 1.6
	F	13	1:10 −0.5	8:25 3.0	14:45 0.2	20:26 1.7
	S	14	2:09 −0.6	9:21 2.9	15:30 0.3	21:15 1.8
	S	15	3:07 −0.7	10:15 2.8	16:13 0.4	22:05 1.9
	M	16	4:04 −0.6	11:10 2.5	16:55 0.5	22:56 2.0
	Tu	17	5:04 −0.4	12:01 2.2	17:33 0.6	23:48 2.1
☽ S	W	18	6:09 −0.2	12:56 1.8	18:10 0.7	. . . . .
	Th	19	0:47 2.1	7:20 0.0	13:52 1.5	18:46 0.6
	F	20	1:50 2.1	8:36 0.2	14:48 1.3	19:21 0.6
A	S	21	2:52 2.1	10:09 0.4	15:40 1.1	20:00 0.6
	S	22	3:52 2.2	11:50 0.4	16:30 1.0	20:40 0.5
	M	23	4:50 2.2	13:05 0.5	17:15 0.9	21:28 0.4
	Tu	24	5:39 2.2	13:52 0.6	17:50 1.0	22:19 0.3
	W	25	6:23 2.2	13:42 0.7	18:28 1.0	23:05 0.2
E ○	Th	26	7:06 2.2	13:27 0.8	19:00 1.2	23:56 0.1
	F	27	7:43 2.2	13:30 0.7	19:20 1.3	. . . . .
	S	28	0:40 0.0	8:15 2.1	13:45 0.6	19:43 1.5
	S	29	1:27 −0.1	8:52 2.1	14:12 0.5	20:16 1.7
	M	30	2:13 −0.2	9:25 2.0	14:44 0.4	20:57 1.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Buenos Aires Mean Local Civil for the meridian 58° 22′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	2:20 5.4	8:47 −0.3	15:00 4.5	21:02 0.0
	Tu	2	3:15 5.2	9:31 −0.1	15:43 4.7	21:52 −0.1
	W	3	4:11 4.9	10:20 0.2	16:27 4.9	22:45 −0.2
	Th	4	5:07 4.5	11:02 0.5	17:09 5.0	23:40 −0.2
	F	5	6:00 4.0	11:44 0.8	17:51 5.0	. . . . .
	S	6	0:36 −0.1	6:55 3.6	12:27 1.2	18:36 4.9
	S	7	1:33 0.0	7:53 3.2	13:12 1.4	19:24 4.8
S	M	8	2:31 0.1	8:56 2.9	14:08 1.8	20:14 4.6
☾ A	Tu	9	3:28 0.2	9:58 2.9	14:59 1.9	21:07 4.5
	W	10	4:23 0.2	10:57 2.9	15:57 2.0	22:01 4.4
	Th	11	5:12 0.3	11:45 3.0	16:55 2.0	22:55 4.4
	F	12	5:53 0.3	12:25 3.2	17:47 1.8	23:48 4.4
	S	13	6:33 0.3	13:00 3.4	18:33 1.5	. . . . .
	S	14	0:38 4.5	7:08 0.2	13:32 3.7	19:18 1.2
E	M	15	1:25 4.5	7:43 0.2	14:04 4.0	20:02 0.8
	Tu	16	2:12 4.5	8:20 0.3	14:37 4.3	20:43 0.5
●	W	17	2:57 4.4	9:02 0.4	15:14 4.5	21:25 0.2
	Th	18	3:45 4.3	9:40 0.6	15:52 4.8	22:15 −0.1
	F	19	4:37 4.1	10:18 0.8	16:32 5.0	23:07 −0.3
	S	20	5:32 3.8	11:00 1.0	17:16 5.2	. . . . .
	S	21	0:03 −0.4	6:30 3.4	11:43 1.2	18:08 5.3
N P	M	22	1:02 −0.4	7:32 3.0	12:34 1.5	18:58 5.3
	Tu	23	2:05 −0.4	8:37 2.9	13:35 1.7	19:57 5.2
☽	W	24	3:09 −0.4	9:42 2.9	14:46 1.7	21:02 5.2
	Th	25	4:12 −0.4	10:42 3.1	16:00 1.5	22:10 5.1
	F	26	5:10 −0.4	11:35 3.6	17:07 1.3	23:15 5.1
	S	27	6:02 −0.3	12:22 3.9	18:10 0.8	. . . . .
E	S	28	0:20 5.0	6:50 −0.2	13:07 4.3	19:10 0.4
	M	29	1:20 4.9	7:35 0.0	13:50 4.6	19:59 0.1
	Tu	30	2:15 4.7	8:23 0.2	14:31 4.9	20:50 −0.2
MAY.						
○	W	1	3:06 4.5	9:02 0.4	15:10 5.1	21:42 −0.4
	Th	2	4:00 4.2	9:41 0.7	15:48 5.3	22:32 −0.4
	F	3	4:50 3.8	10:20 1.0	16:30 5.3	23:24 −0.3
	S	4	5:42 3.2	11:00 1.2	17:12 5.2	. . . . .
S	S	5	0:14 −0.2	6:35 3.0	11:40 1.5	17:56 5.0
	M	6	1:05 −0.1	7:32 2.8	12:22 1.8	18:41 4.8
A	Tu	7	1:55 0.1	8:30 2.8	13:12 2.0	19:28 4.6
	W	8	2:46 0.2	9:27 2.8	14:10 2.2	20:22 4.4
☾	Th	9	3:38 0.3	10:17 2.9	15:15 2.2	21:20 4.2
	F	10	4:17 0.4	11:00 3.1	16:17 2.0	22:16 4.1
	S	11	5:00 0.4	11:38 3.4	17:13 1.7	23:12 4.1
E	S	12	5:38 0.4	12:10 3.8	18:05 1.3	. . . . .
	M	13	0:05 4.1	6:17 0.5	12:42 4.2	18:52 0.8
	Tu	14	0:57 4.1	7:00 0.5	13:17 4.5	19:33 0.4
	W	15	1:47 4.2	7:42 0.5	13:57 4.9	20:22 −0.1
●	Th	16	2:40 4.1	8:22 0.6	14:37 5.3	21:12 −0.4
	F	17	3:32 3.9	9:08 0.7	15:18 5.6	22:08 −0.7
	S	18	4:25 3.8	9:45 0.9	16:04 5.8	22:57 −0.9
N P	S	19	5:20 3.4	10:31 1.1	16:51 5.8	23:52 −0.9
	M	20	6:18 3.2	11:21 1.2	17:43 5.8	. . . . .
	Tu	21	0:50 −0.8	7:18 3.1	12:18 1.4	18:38 5.6
	W	22	1:50 −0.7	8:20 3.1	13:25 1.5	19:42 5.4
☽	Th	23	2:49 −0.6	9:21 3.2	14:38 1.4	20:48 5.1
	F	24	3:48 −0.4	10:18 3.7	15:33 1.3	21:59 4.9
E	S	25	4:44 −0.2	11:10 4.0	17:05 1.0	23:10 4.6
	S	26	5:34 0.0	11:58 4.4	18:08 0.6	. . . . .
	M	27	0:15 4.5	6:25 0.3	12:40 4.6	19:00 0.2
	Tu	28	1:13 4.3	7:12 0.4	13:21 5.0	19:53 −0.1
	W	29	2:07 4.1	7:58 0.6	14:01 5.3	20:45 −0.4
○	Th	30	2:58 3.8	8:31 0.8	14:41 5.4	21:34 −0.5
	F	31	3:47 3.4	9:10 1.0	15:22 5.5	22:20 −0.5
JUNE.						
S	S	1	4:36 3.2	9:46 1.3	16:00 5.5	23:06 −0.4
	S	2	5:23 2.9	10:28 1.4	16:40 5.3	23:50 −0.3
	M	3	6:12 2.7	11:00 1.6	17:20 5.1	. . . . .
A	Tu	4	0:32 −0.1	7:00 2.6	11:39 1.9	18:00 4.9
	W	5	1:14 0.1	7:48 2.8	12:24 2.2	18:45 4.6
	Th	6	1:55 0.3	8:37 2.9	13:16 2.2	19:34 4.3
☾	F	7	2:36 0.4	9:22 3.1	14:22 2.0	20:30 4.0
	S	8	3:16 0.5	10:00 3.3	15:30 1.8	21:30 3.9
E	S	9	3:57 0.6	10:38 3.7	16:35 1.5	22:32 3.7
	M	10	4:42 0.7	11:15 4.1	17:26 1.1	23:23 3.7
	Tu	11	5:32 0.7	11:55 4.5	18:20 0.6	. . . . .
	W	12	0:31 3.8	6:20 0.7	12:38 5.0	19:15 0.1
	Th	13	1:27 3.7	7:08 0.7	13:22 5.5	20:07 −0.4
	F	14	2:22 3.7	7:48 0.7	14:07 5.9	20:58 −0.8
● N	S	15	3:16 3.5	8:35 0.7	14:54 6.1	21:51 −1.1
P	S	16	4:10 3.4	9:22 0.8	15:44 6.3	22:43 −0.9
	M	17	5:08 3.3	10:13 0.9	16:44 6.3	23:37 −1.2
	Tu	18	5:58 3.3	11:07 1.0	17:27 6.1	. . . . .
	W	19	0:30 −1.0	6:58 3.3	12:06 1.0	18:26 5.8
	Th	20	1:25 −0.7	7:50 3.6	13:12 1.1	19:26 5.3
☽ E	F	21	2:20 −0.4	8:48 3.8	14:45 1.1	20:32 4.9
	S	22	3:15 −0.1	9:43 4.0	15:41 1.0	21:47 4.5
	S	23	4:09 0.2	10:35 4.3	16:50 0.6	22:58 4.2
	M	24	5:06 0.5	11:24 4.6	17:53 0.4	. . . . .
	Tu	25	0:04 3.9	5:58 0.7	12:10 4.9	18:55 0.1
	W	26	1:05 3.8	6:44 0.9	12:56 5.2	19:50 −0.2
	Th	27	2:00 3.5	7:27 1.0	13:40 5.4	20:40 −0.4
S	F	28	2:50 3.3	8:06 1.1	14:20 5.5	21:25 −0.5
○	S	29	3:38 3.1	8:46 1.3	15:00 5.6	22:06 −0.5
	S	30	4:20 2.9	9:22 1.4	15:37 5.5	22:45 −0.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	0:00 4.9	6:10 0.2	12:26 3.5	17:54 0.9
	Tu	2	0:21 5.3	7:15 −0.2	13:32 3.4	18:49 1.0
N	W	3	1:16 5.7	8:16 −0.7	14:33 3.3	19:46 1.0
○ P	Th	4	2:10 6.1	9:12 −1.1	15:32 3.3	20:42 0.9
	F	5	3:04 6.3	10:07 −1.3	16:25 3.4	21:38 0.9
	S	6	3:59 6.4	11:00 −1.4	17:18 3.5	22:36 0.8
	S	7	4:58 6.3	11:50 −1.3	18:08 3.7	23:32 0.7
	M	8	5:49 6.0	12:40 −1.1	19:00 3.9	. . . . .
E	Tu	9	0:33 0.7	6:45 5.7	13:30 −0.7	19:50 4.2
	W	10	1:35 0.7	7:43 5.2	14:18 −0.3	20:41 4.3
☾	Th	11	2:40 0.7	8:48 4.6	15:04 0.1	21:29 4.5
	F	12	3:42 0.6	9:54 4.1	15:58 0.5	22:17 4.6
	S	13	4:49 0.5	10:59 3.7	16:50 0.8	23:06 4.7
	S	14	5:54 0.4	12:02 3.4	17:38 1.1	23:57 4.9
	M	15	6:56 0.2	13:06 3.2	18:24 1.3	. . . . .
	Tu	16	0:44 5.0	7:52 0.1	14:04 3.0	19:10 1.5
S A	W	17	1:17 5.1	8:41 −0.1	14:57 2.9	19:54 1.6
	Th	18	2:10 5.1	9:24 −0.2	15:42 2.8	20:35 1.7
●	F	19	2:50 5.1	10:08 −0.2	16:22 2.8	21:14 1.7
	S	20	3:30 5.1	10:38 −0.2	17:00 2.8	21:53 1.7
	S	21	4:07 5.0	11:12 −0.2	17:33 3.0	22:30 1.6
	M	22	4:46 5.0	11:43 −0.1	18:06 3.2	23:10 1.5
	Tu	23	5:24 4.8	12:14 0.0	18:39 3.4	23:55 1.4
E	W	24	6:08 4.6	12:45 0.2	19:09 3.6	. . . . .
	Th	25	0:45 1.2	6:58 4.4	13:19 0.4	19:48 3.9
	F	26	1:38 1.1	7:46 4.0	13:55 0.6	20:22 4.2
☽	S	27	2:30 0.8	8:40 3.8	14:42 0.8	21:40 4.5
	S	28	3:38 0.6	9:48 3.6	15:30 0.9	22:00 4.9
	M	29	4:46 0.3	11:08 3.3	16:24 1.0	22:57 5.2
	Tu	30	5:54 −0.1	12:11 3.2	17:21 1.1	23:56 5.6
N	W	31	6:59 −0.4	13:15 3.1	18:22 1.0	. . . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	0:54 5.9	7:58 −0.8	14:14 3.2	19:24 1.0
○	F	2	1:51 6.2	8:54 −1.0	15:08 3.4	20:24 0.8
	S	3	2:48 6.2	9:48 −1.1	16:00 3.5	21:23 0.7
	S	4	3:44 6.2	10:37 −1.1	16:50 3.8	22:21 0.5
	M	5	4:40 6.0	11:25 −0.9	17:39 4.1	23:20 0.4
E	Tu	6	5:36 5.7	12:12 −0.7	18:27 4.4	. . . . .
	W	7	0:19 0.4	6:30 5.3	13:07 −0.3	19:14 4.5
	Th	8	1:20 0.4	7:30 4.7	13:42 0.1	20:00 4.6
☾	F	9	2:15 0.4	8:32 4.3	14:36 0.5	20:49 4.7
	S	10	3:20 0.4	9:34 3.7	15:22 0.9	21:38 4.7
	S	11	4:26 0.4	10:38 3.3	16:11 1.1	22:30 4.8
	M	12	5:30 0.3	11:42 3.0	17:00 1.4	23:20 4.8
S	Tu	13	6:30 0.2	12:44 2.8	17:50 1.6	. . . . .
A	W	14	0:09 4.9	7:21 0.1	13:40 2.8	18:38 1.8
	Th	15	0:55 4.9	8:08 0.0	14:26 2.9	19:24 1.8
	F	16	1:38 5.0	8:48 0.0	15:06 2.9	20:06 1.6
	S	17	2:20 5.0	9:24 0.0	15:40 3.0	20:50 1.5
●	S	18	3:00 5.0	9:58 0.0	16:15 3.2	21:30 1.4
	M	19	3:42 4.9	10:30 0.0	16:47 3.4	22:10 1.3
E	Tu	20	4:22 4.8	11:01 0.1	17:20 3.6	22:54 1.1
	W	21	5:06 4.6	11:33 0.2	17:49 3.8	23:40 0.9
	Th	22	5:50 4.4	12:06 0.4	18:22 4.1	. . . . .
	F	23	0:28 0.8	6:40 4.1	12:47 0.7	19:04 4.2
	S	24	1:20 0.5	7:34 3.8	13:29 0.9	19:48 4.4
☽	S	25	2:22 0.4	8:40 3.5	14:12 1.1	20:38 4.8
	M	26	3:27 0.2	9:49 3.2	15:02 1.2	21:34 5.1
N	Tu	27	4:36 0.0	10:58 3.0	16:02 1.3	22:35 5.4
	W	28	5:41 −0.3	12:02 3.0	17:06 1.3	23:36 5.6
	Th	29	6:42 −0.5	13:00 3.1	18:11 1.1	. . . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:38 5.8	7:38 −0.7	13:53 3.3	19:14 0.9
	S	2	1:36 5.9	8:30 −0.8	14:43 3.6	20:14 0.6
○	S	3	2:33 5.9	9:20 −0.7	15:31 4.0	21:12 0.4
E	M	4	3:29 5.8	10:06 −0.6	16:17 4.3	22:10 0.2
	Tu	5	4:23 5.5	10:51 −0.4	17:08 4.5	23:06 0.1
	W	6	5:19 5.1	11:35 −0.1	17:48 4.7	23:58 0.0
	Th	7	6:14 4.7	12:25 0.2	18:35 4.7	. . . . .
	F	8	0:54 0.1	7:15 4.2	13:10 0.6	19:19 4.8
	S	9	1:54 0.2	8:14 3.7	13:56 1.0	20:08 4.8
☾	S	10	2:58 0.2	9:16 3.3	14:43 1.3	20:59 4.7
S	M	11	4:00 0.3	10:20 3.0	15:34 1.6	21:51 4.7
A	Tu	12	5:00 0.3	11:22 2.9	16:28 1.7	22:42 4.7
	W	13	5:54 0.2	12:20 2.9	17:21 1.8	23:32 4.7
	Th	14	6:41 0.1	13:06 3.0	18:12 1.8	. . . . .
	F	15	0:20 4.7	7:24 0.1	13:44 3.1	18:58 1.7
	S	16	1:05 4.7	8:00 0.1	14:20 3.3	19:40 1.5
	S	17	1:50 4.7	8:35 0.1	14:52 3.5	20:25 1.2
●	M	18	2:34 4.7	9:10 0.1	15:25 3.7	21:07 1.0
E	Tu	19	3:18 4.7	9:42 0.2	15:56 4.0	21:51 0.7
	W	20	4:02 4.6	10:16 0.4	16:29 4.2	22:32 0.5
	Th	21	4:48 4.3	10:56 0.6	17:08 4.3	23:19 0.3
	F	22	5:37 4.1	11:34 0.8	17:46 4.6	. . . . .
	S	23	0:12 0.2	6:33 3.8	12:15 1.0	18:30 4.8
	S	24	1:11 0.1	7:36 3.4	12:57 1.3	19:20 4.9
N ☽	M	25	2:15 0.0	8:42 3.2	13:49 1.4	20:15 5.1
	Tu	26	3:21 −0.1	9:49 3.0	14:50 1.5	21:16 5.2
	W	27	4:26 −0.3	10:58 2.9	15:57 1.5	22:20 5.3
P	Th	28	5:37 −0.4	11:52 3.1	17:05 1.3	23:25 5.4
	F	29	6:24 −0.5	12:44 3.4	18:10 1.0	. . . . .
	S	30	0:27 5.5	7:15 −0.5	13:31 3.8	19:10 0.7
	S	31	1:25 5.5	8:02 −0.4	14:16 4.2	20:07 0.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	2:20 5.4	8:47 −0.3	15:00 4.5	21:02 0.0
	Tu	2	3:15 5.2	9:31 −0.1	15:43 4.7	21:52 −0.1
	W	3	4:11 4.9	10:20 0.2	16:27 4.9	22:45 −0.2
	Th	4	5:07 4.5	11:02 0.5	17:09 5.0	23:40 −0.2
	F	5	6:00 4.0	11:44 0.8	17:51 5.0	. . . . .
	S	6	0:36 −0.1	6:55 3.6	12:27 1.2	18:36 4.9
	S	7	1:33 0.0	7:53 3.2	13:12 1.4	19:24 4.8
S	M	8	2:31 0.1	8:56 2.9	14:03 1.8	20:14 4.6
☾ A	Tu	9	3:28 0.2	9:58 2.9	14:59 1.9	21:07 4.5
	W	10	4:23 0.2	10:57 2.9	15:57 2.0	22:01 4.4
	Th	11	5:12 0.3	11:45 3.0	16:55 2.0	22:55 4.4
	F	12	5:53 0.3	12:25 3.2	17:47 1.8	23:48 4.4
	S	13	6:33 0.3	13:00 3.4	18:33 1.5	. . . . .
	S	14	0:38 4.5	7:08 0.2	13:32 3.7	19:18 1.2
E	M	15	1:25 4.5	7:43 0.2	14:04 4.0	20:02 0.8
	Tu	16	2:12 4.5	8:20 0.3	14:37 4.3	20:43 0.5
●	W	17	2:57 4.4	9:02 0.4	15:14 4.5	21:25 0.2
	Th	18	3:45 4.3	9:40 0.6	15:52 4.8	22:15 −0.1
	F	19	4:37 4.1	10:18 0.8	16:32 5.0	23:07 −0.3
	S	20	5:32 3.8	11:00 1.0	17:16 5.2	. . . . .
	S	21	0:03 −0.4	6:30 3.4	11:43 1.2	18:08 5.3
N P	M	22	1:02 −0.4	7:32 3.0	12:34 1.5	18:58 5.3
	Tu	23	2:05 −0.4	8:37 2.9	13:35 1.7	19:57 5.2
☽	W	24	3:09 −0.4	9:42 2.9	14:46 1.7	21:02 5.2
	Th	25	4:12 −0.4	10:42 3.1	16:00 1.5	22:10 5.1
	F	26	5:10 −0.4	11:35 3.6	17:07 1.3	23:15 5.1
	S	27	6:02 −0.3	12:22 3.9	18:10 0.8	. . . . .
E	S	28	0:20 5.0	6:50 −0.2	13:07 4.3	19:10 0.4
	M	29	1:20 4.9	7:35 0.0	13:50 4.6	19:59 0.1
	Tu	30	2:15 4.7	8:23 0.2	14:31 4.9	20:50 −0.2

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	3:06 4.5	9:02 0.4	15:10 5.1	21:42 −0.4
	Th	2	4:00 4.2	9:41 0.7	15:48 5.3	22:32 −0.4
	F	3	4:50 3.8	10:20 1.0	16:30 5.3	23:24 −0.3
	S	4	5:42 3.2	11:00 1.2	17:12 5.2	. . . . .
S	S	5	0:14 −0.2	6:35 3.0	11:40 1.5	17:56 5.0
	M	6	1:05 −0.1	7:32 2.8	12:22 1.8	18:41 4.8
A	Tu	7	1:55 0.1	8:30 2.8	13:12 2.0	19:28 4.6
	W	8	2:46 0.2	9:27 2.8	14:10 2.2	20:22 4.4
☾	Th	9	3:33 0.3	10:17 2.9	15:15 2.2	21:20 4.2
	F	10	4:17 0.4	11:00 3.1	16:17 2.0	22:16 4.1
	S	11	5:00 0.4	11:38 3.4	17:13 1.7	23:12 4.1
E	S	12	5:38 0.4	12:10 3.8	18:05 1.3	. . . . .
	M	13	0:05 4.1	6:17 0.5	12:42 4.2	18:52 0.8
	Tu	14	0:57 4.1	7:00 0.5	13:17 4.5	19:33 0.4
	W	15	1:47 4.2	7:42 0.5	13:57 4.9	20:22 −0.1
●	Th	16	2:40 4.1	8:22 0.6	14:37 5.3	21:12 −0.4
	F	17	3:32 3.9	9:08 0.7	15:18 5.6	22:08 −0.7
	S	18	4:25 3.8	9:45 0.9	16:04 5.8	22:57 −0.9
N P	S	19	5:20 3.4	10:31 1.1	16:51 5.8	23:52 −0.9
	M	20	6:18 3.2	11:21 1.2	17:48 5.8	. . . . .
	Tu	21	0:50 −0.8	7:18 3.1	12:18 1.4	18:38 5.6
	W	22	1:50 −0.7	8:20 3.1	13:25 1.5	19:42 5.4
☽	Th	23	2:49 −0.6	9:21 3.2	14:38 1.4	20:48 5.1
	F	24	3:48 −0.4	10:18 3.7	15:33 1.3	21:59 4.9
E	S	25	4:44 −0.2	11:10 4.0	17:05 1.0	23:10 4.6
	S	26	5:34 0.0	11:58 4.4	18:08 0.6	. . . . .
	M	27	0:15 4.5	6:25 0.3	12:40 4.6	19:00 0.2
	Tu	28	1:13 4.3	7:12 0.4	13:21 5.0	19:53 −0.1
	W	29	2:07 4.1	7:53 0.6	14:01 5.3	20:45 −0.4
○	Th	30	2:58 3.8	8:31 0.8	14:41 5.4	21:34 −0.5
	F	31	3:47 3.4	9:10 1.0	15:22 5.5	22:20 −0.5

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	4:36 3.2	9:46 1.3	16:00 5.5	23:06 −0.4
	S	2	5:23 2.9	10:23 1.4	16:40 5.3	23:50 −0.3
	M	3	6:12 2.7	11:00 1.6	17:20 5.1	. . . . .
A	Tu	4	0:32 −0.1	7:00 2.6	11:39 1.9	18:00 4.9
	W	5	1:14 0.1	7:48 2.8	12:24 2.2	18:45 4.6
	Th	6	1:55 0.3	8:37 2.9	13:16 2.2	19:34 4.3
☾	F	7	2:36 0.4	9:22 3.1	14:22 2.0	20:30 4.0
	S	8	3:16 0.5	10:00 3.3	15:30 1.8	21:30 3.9
E	S	9	3:57 0.6	10:38 3.7	16:35 1.5	22:32 3.7
	M	10	4:42 0.7	11:15 4.1	17:26 1.1	23:23 3.7
	Tu	11	5:32 0.7	11:55 4.5	18:20 0.6	. . . . .
	W	12	0:31 3.8	6:20 0.7	12:38 5.0	19:15 0.1
	Th	13	1:27 3.7	7:08 0.7	13:22 5.5	20:07 −0.4
	F	14	2:22 3.7	7:48 0.7	14:07 5.9	20:58 −0.8
● N	S	15	3:16 3.5	8:35 0.7	14:54 6.1	21:51 −1.1
P	S	16	4:10 3.4	9:22 0.8	15:44 6.3	22:43 −0.9
	M	17	5:08 3.3	10:13 0.9	16:44 6.3	23:37 −1.2
	Tu	18	5:58 3.3	11:07 1.0	17:27 6.1	. . . . .
	W	19	0:30 −1.0	6:58 3.3	12:06 1.0	18:26 5.8
	Th	20	1:25 −0.7	7:50 3.6	13:12 1.1	19:26 5.3
☽ E	F	21	2:20 −0.4	8:48 3.8	14:45 1.1	20:32 4.9
	S	22	3:15 −0.1	9:43 4.0	15:41 1.0	21:47 4.5
	S	23	4:09 0.2	10:35 4.3	16:50 0.6	22:58 4.2
	M	24	5:06 0.5	11:24 4.6	17:53 0.4	. . . . .
	Tu	25	0:04 3.9	5:58 0.7	12:10 4.9	18:55 0.1
	W	26	1:05 3.8	6:44 0.9	12:56 5.2	19:50 −0.2
	Th	27	2:00 3.5	7:27 1.0	13:40 5.4	20:40 −0.4
S	F	28	2:50 3.3	8:06 1.1	14:20 5.5	21:25 −0.5
○	S	29	3:38 3.1	8:46 1.3	15:00 5.6	22:06 −0.5
	S	30	4:20 2.9	9:22 1.4	15:37 5.5	22:45 −0.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon: for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	5:05	10:00	16:17	23:24
			2.8	1.5	5.3	−0.3
	Tu	2	5:45	10:37	16:53	. . .
			2.8	1.7	5.1	. . .
	W	3	0:00	6:28	11:13	17:32
			−0.1	2.8	1.7	4.8
	Th	4	0:32	7:01	11:53	18:12
			0.1	3.0	1.8	4.5
	F	5	1:05	7:40	12:42	18:57
			0.3	3.1	1.7	4.2
E	S	6	1:38	8:15	13:40	19:48
			0.5	3.3	1.7	3.9
☾	S	7	2:15	8:53	14:47	20:48
			0.7	3.6	1.5	3.6
	M	8	2:57	9:35	15:45	21:55
			0.8	3.9	1.2	3.4
	Tu	9	3:52	10:24	16:53	23:05
			0.9	4.3	0.9	3.4
	W	10	4:45	11:15	18:00	. . .
			1.0	4.8	0.4	. . .
	Th	11	0:12	5:39	12:07	19:00
			3.3	1.0	5.3	−0.1
	F	12	1:14	6:32	12:58	19:55
			3.3	0.9	5.7	−0.7
N	S	13	2:10	7:25	13:49	20:47
			3.3	0.9	6.1	−1.0
● P	S	14	3:03	8:17	14:40	21:38
			3.3	0.7	6.4	−1.3
	M	15	3:50	9:10	15:32	22:28
			3.5	0.7	6.5	−1.3
	Tu	16	4:40	10:03	16:28	23:19
			3.6	0.5	6.4	−1.2
	W	17	5:33	11:00	17:17	. . .
			3.7	0.6	6.1	. . .
	Th	18	0:07	6:24	11:58	18:13
			−1.0	3.9	0.5	5.7
E	F	19	0:57	7:15	13:00	19:12
			−0.6	4.1	0.7	5.2
	S	20	1:47	8:06	14:08	20:18
			−0.2	4.2	0.7	4.6
☽	S	21	2:37	9:00	15:15	21:30
			0.2	4.4	0.6	4.1
	M	22	3:38	9:58	16:28	22:42
			0.6	4.5	0.5	3.7
	Tu	23	4:35	10:49	17:41	23:54
			0.9	4.7	0.3	3.4
	W	24	5:28	11:43	18:47	. . .
			1.1	5.0	0.1	. . .
	Th	25	0:59	6:20	12:34	19:42
			3.2	1.2	5.2	−0.2
S	F	26	1:55	7:07	13:20	20:30
			3.1	1.3	5.3	−0.3
	S	27	2:45	7:51	14:04	22:12
			3.1	1.4	5.4	−0.2
○ A	S	28	3:27	8:32	14:42	21:47
			3.0	1.4	5.4	−0.4
	M	29	4:08	9:10	15:20	22:21
			3.0	1.4	5.3	−0.3
	Tu	30	4:37	9:45	15:55	22:53
			3.1	1.4	5.2	−0.2
	W	31	5:10	10:20	16:32	23:22
			3.2	1.4	5.0	0.0

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	5:40	10:55	17:09	23:50
			3.4	1.4	4.8	0.2
E	F	2	6:13	11:34	17:47	. . .
			3.4	1.3	4.5	. . .
	S	3	0:18	6:40	12:20	18:28
			0.3	3.6	1.3	4.1
	S	4	0:48	7:12	13:10	19:17
			0.6	3.8	1.2	3.8
☾	M	5	1:23	7:52	14:02	20:10
			0.8	4.0	1.0	3.5
	Tu	6	2:08	8:41	15:12	21:24
			1.0	4.3	0.9	3.2
	W	7	2:59	9:37	16:27	22:43
			1.1	4.6	0.6	3.0
	Th	8	3:59	10:36	17:38	23:55
			1.3	5.0	0.2	3.0
N	F	9	5:03	11:37	18:42	. . .
			1.3	5.4	−0.3	. . .
	S	10	1:00	6:08	12:35	19:40
			3.0	1.2	5.8	−0.7
	S	11	1:55	7:08	13:32	20:32
			3.2	0.9	6.1	−1.0
P ●	M	12	2:46	8:05	14:27	21:22
			3.4	0.7	6.3	−1.2
	Tu	13	3:33	9:00	15:20	22:08
			3.7	0.4	6.4	−1.2
	W	14	4:20	9:55	16:13	22:54
			4.1	0.2	6.2	−1.0
E	Th	15	5:05	10:50	17:05	23:38
			4.3	0.1	5.9	−0.7
	F	16	5:52	11:47	17:58	. . .
			4.5	0.1	5.4	. . .
	S	17	0:23	6:37	12:45	18:58
			−0.3	4.6	0.2	4.8
	S	18	1:05	7:23	13:41	20:00
			0.1	4.6	0.2	4.3
☽	M	19	2:05	8:15	14:50	21:08
			0.6	4.7	0.3	3.7
	Tu	20	2:55	9:10	16:08	22:20
			1.0	4.7	0.3	3.3
	W	21	3:52	10:08	17:17	23:35
			1.3	4.7	0.2	3.1
S	Th	22	4:52	11:08	18:23	. . .
			1.5	4.8	0.1	. . .
	F	23	0:46	5:52	12:03	19:20
			3.0	1.6	4.9	0.0
	S	24	1:43	6:46	12:54	20:05
			3.0	1.6	4.9	−0.2
A	S	25	2:27	7:35	13:40	20:43
			3.1	1.5	5.0	−0.2
	M	26	3:04	8:17	14:20	21:17
			3.2	1.4	5.0	−0.2
○	Tu	27	3:34	8:55	15:00	21:48
			3.4	1.3	5.0	−0.1
	W	28	4:02	9:32	15:38	22:15
			3.5	1.2	4.9	0.0
E	Th	2'	4:30	10:05	16:15	22:43
			3.7	1.1	4.8	0.1
	F	30	4:58	10:42	16:52	23:10
			3.8	0.9	4.6	0.3
	S	31	5:23	11:21	17:30	23:40
			4.0	0.8	4.3	0.5

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	5:52	12:00	18:10	. . .
			4.2	0.6	4.0	. . .
	M	2	0:14	6:30	12:47	19:00
			0.7	4.3	0.5	3.7
	Tu	3	0:48	7:12	13:44	20:00
			0.9	4.5	0.5	3.3
☾	W	4	1:28	8:02	14:51	21:13
			1.1	4.7	0.4	3.0
N	Th	5	2:17	8:59	16:04	22:29
			1.3	4.9	0.2	2.7
	F	6	3:22	10:04	17:18	23:40
			1.5	5.1	0.0	2.7
	S	7	4:38	11:11	18:22	. . .
			1.6	5.3	−0.3	. . .
	S	8	0:42	5:53	12:17	19:20
			3.0	1.4	5.6	−0.6
P	M	9	1:36	6:59	13:18	20:12
			3.3	1.0	5.8	−0.7
●	Tu	10	2:23	7:58	14:16	20:59
			3.3	0.5	5.9	−0.8
E	W	11	3:08	8:54	15:09	21:42
			4.2	0.2	5.9	−0.7
	Th	12	3:52	9:49	16:01	22:26
			4.6	−0.1	5.7	0.5
	F	13	4:36	10:42	16:55	23:10
			4.8	−0.3	5.4	−0.3
	S	14	5:20	11:30	17:48	23:56
			5.0	−0.3	5.0	0.1
	S	15	6:04	12:25	18:46	. . .
			5.1	−0.3	4.4	. . .
	M	16	0:38	6:48	13:23	19:44
			0.5	5.1	−0.1	3.8
	Tu	17	1:22	7:35	14:26	20:47
			0.9	5.0	0.0	3.3
☽ S	W	18	2:10	8:28	15:38	21:56
			1.3	4.9	0.2	3.0
	Th	19	3:07	9:26	16:41	23:10
			1.6	4.7	0.2	2.8
	F	20	4:11	10:25	17:44	. . .
			1.8	4.6	0.2	. . .
A	S	21	0:19	5:18	11:24	18:40
			2.8	1.9	4.5	0.2
	S	22	1:11	6:20	12:20	19:24
			3.0	1.9	4.5	0.2
	M	23	1:51	7:12	13:10	20:03
			3.2	1.6	4.5	0.1
	Tu	24	2:22	7:56	13:58	20:36
			3.5	1.4	4.6	0.2
	W	25	2:52	8:36	14:40	21:06
			3.7	1.2	4.6	0.2
E ○	Th	26	3:21	9:14	15:20	21:34
			3.9	0.9	4.6	0.3
	F	27	3:50	9:52	16:02	22:07
			4.2	0.7	4.4	0.4
	S	28	4:20	10:26	16:36	22:40
			4.3	0.4	4.3	0.5
	S	29	4:50	11:04	17:20	23:10
			4.5	0.2	4.1	0.7
	M	30	5:24	11:50	18:09	23:42
			4.8	0.0	3.8	0.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtrac it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15.47 is 3:47 p. m.

●, new moon; ☽, 1st quar.. ○, full moon; ☾, 3d quar. E, moon on the equator; N, S, moon farthest north or south of the equator. A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	6:02	12:40	19:00	. . .
			4.9	0.0	3.4	. . .
	W	2	0:19	6:45	13:36	20:00
			1.1	5.1	—0.1	3.1
N	Th	3	1:00	7:36	14:39	21:07
☾			1.3	5.1	—0.1	2.8
	F	4	1:56	8:35	15:46	22:17
			1.5	5.1	—0.1	2.7
	S	5	3:07	9:41	16:53	23:23
			1.7	5.1	—0.1	2.9
	S	6	4:26	10:50	17:57	. . .
			1.5	5.1	—0.2	. . .
P	M	7	0:20	5:42	12:00	18:52
			3.3	1.2	5.2	—0.3
	Tu	8	1:10	6:51	13:04	19:42
			3.7	0.8	5.3	—0.3
E	W	9	1:56	7:52	14:04	20:30
			4.2	0.4	5.3	—0.2
●	Th	10	2:41	8:48	15:00	21:16
			4.6	—0.1	5.2	—0.1
	F	11	3:25	9:36	15:56	22:01
			4.9	—0.4	5.1	0.0
	S	12	4:08	10:29	16:48	22:41
			5.2	—0.6	4.7	0.3
	S	13	4:48	11:20	17:40	23:22
			5.4	—0.7	4.3	0.6
	M	14	5:30	12:13	18:32	. . .
			5.5	—0.6	3.9	. . .
	Tu	15	0:02	6:13	13:06	19:26
			0.9	5.4	—0.4	3.4
S	W	16	0:45	7:00	14:01	20:24
			1.1	5.2	—0.2	3.0
☽	Th	17	1:31	7:49	14:57	21:28
			1.4	4.9	0.0	2.7
	F	18	2:26	8:42	15:56	22:30
			1.8	4.7	0.2	2.8
A	S	19	3:28	9:38	16:52	23:30
			2.0	4.4	0.3	2.9
	S	20	4:38	10:40	17:42	. . .
			2.1	4.2	0.4	. . .
	M	21	0:20	5:42	11:41	18:26
			3.1	1.9	4.1	0.5
	Tu	22	0:58	6:38	12:36	19:04
			3.4	1.7	4.1	0.5
E	W	23	1:31	7:26	13:25	19:40
			3.7	1.4	4.1	0.6
	Th	24	2:02	8:10	14:11	20:17
			4.0	1.0	4.1	0.6
○	F	25	2:32	8:44	14:56	20:56
			4.2	0.6	4.1	0.6
	S	26	3:07	9:26	15:42	21:30
			4.6	0.2	4.1	0.7
	S	27	3:42	10:10	16:28	22:06
			4.9	—0.1	3.9	0.8
	M	28	4:19	10:57	17:16	22:40
			5.2	—0.4	3.7	1.0
	Tu	29	4:57	11:46	18:06	23:20
			5.4	—0.5	3.5	1.1
N	W	30	5:41	12:35	19:00	. . .
			5.5	—0.6	3.1	. . .
	Th	31	0:02	6:28	13:30	19:57
			1.2	5.5	—0.5	2.9

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	0:51	7:20	14:27	20:58
			1.3	5.4	—0.4	2.9
	S	2	1:51	8:20	15:28	21:59
			1.5	5.3	—0.3	3.1
P	S	3	3:02	9:26	16:28	22:57
			1.6	5.1	—0.1	3.3
	M	4	4:21	10:35	17:27	23:51
			1.3	4.9	0.0	3.7
E	Tu	5	5:36	11:46	18:20	. . .
			1.0	4.7	0.1	. . .
	W	6	0:40	6:45	12:54	19:10
			4.1	0.6	4.6	0.2
	Th	7	1:26	7:39	13:56	20:03
			4.5	0.2	4.6	0.3
●	F	8	2:12	8:36	14:53	20:48
			4.9	—0.2	4.4	0.5
	S	9	2:53	9:30	15:47	21:29
			5.3	—0.5	4.2	0.6
	S	10	3:34	10:22	16:38	22:10
			5.5	—0.7	3.8	0.8
	M	11	4:20	11:12	17:30	22:51
			5.6	—0.8	3.6	1.0
S	Tu	12	5:01	12:00	18:20	23:32
			5.6	—0.7	3.3	1.2
	W	13	5:45	12:48	19:10	. . .
			5.5	—0.5	3.0	. . .
	Th	14	0:15	6:29	13:36	20:02
			1.5	5.2	—0.3	3.0
	F	15	1:00	7:14	14:21	20:54
			1.8	4.9	—0.1	2.8
A	S	16	1:50	8:04	15:08	21:45
☽			2.0	4.6	0.2	3.0
	S	17	2:48	8:56	15:51	22:34
			2.0	4.3	0.4	3.2
	M	18	3:48	9:58	16:38	23:16
			1.9	4.1	0.5	3.4
E	Tu	19	4:52	10:49	17:14	23:50
			1.8	3.9	0.7	3.6
	W	20	5:52	11:47	17:56	. . .
			1.5	3.7	0.8	. . .
	Th	21	0:26	6:38	12:43	18:44
			4.0	1.1	3.7	0.8
	F	22	1:04	7:28	13:38	19:28
			4.3	0.7	3.7	0.8
	S	23	1:42	8:18	14:30	20:10
			4.7	0.3	3.7	0.9
○	S	24	2:24	9:08	15:23	20:50
			5.1	—0.2	3.6	0.9
	M	25	3:06	9:56	16:14	21:33
			5.4	—0.5	3.5	1.0
N	Tu	26	3:50	10:46	17:06	22:18
			5.7	—0.8	3.3	1.1
	W	27	4:36	11:37	18:00	23:04
			5.9	—1.0	3.3	1.1
P	Th	28	5:24	12:28	18:52	23:54
			5.9	—1.0	3.2	1.2
	F	29	6:16	13:18	19:44	. . .
			5.8	—0.9	3.2	. . .
	S	30	0:50	7:10	14:12	20:40
			1.2	5.6	—0.7	3.3

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	1:54	8:11	15:06	21:34
			1.2	5.3	—0.4	3.6
E	M	2	3:02	9:16	16:00	22:28
			1.2	4.9	—0.1	3.9
	Tu	3	4:16	10:26	16:52	23:18
			1.0	4.6	0.2	4.2
	W	4	5:27	11:37	17:46	. . .
			0.7	4.3	0.5	. . .
	Th	5	0:04	6:28	12:42	18:41
			4.5	0.4	4.1	0.6
	F	6	0:52	7:31	13:45	19:29
			4.9	0.0	3.9	0.8
	S	7	1:40	8:30	14:42	20:14
			5.2	—0.3	3.7	0.9
●	S	8	2:26	9:24	15:38	20:58
			5.4	—0.5	3.4	1.0
S	M	9	3:10	10:14	16:30	21:42
			5.6	—0.7	3.2	1.2
	Tu	10	3:54	11:01	17:18	22:25
			5.6	—0.7	3.1	1.3
	W	11	4:37	11:44	18:06	23:08
			5.6	—0.7	3.0	1.5
	Th	12	5:20	12:28	18:50	23:50
			5.4	—0.5	2.9	1.6
	F	13	6:01	13:06	19:34	. . .
			5.1	—0.3	3.0	. . .
A	S	14	0:33	6:45	13:43	20:16
			1.7	4.8	0.0	3.1
	S	15	1:20	7:30	14:20	20:56
			1.8	4.5	0.2	3.3
☽	M	16	2:10	8:16	14:52	21:31
			1.8	4.2	0.4	3.5
E	Tu	17	3:06	9:05	15:27	22:08
			1.7	3.9	0.6	3.7
	W	18	4:06	10:00	16:06	22:45
			1.5	3.7	0.7	4.0
	Th	19	4:57	11:00	16:56	23:26
			1.3	3.5	0.9	4.3
	F	20	[illegible]56	12:02	17:45	. . .
			[illegible]9	3.4	0.9	. . .
	S	21	[illegible]12	6:56	13:14	18:33
			[illegible]7	0.5	3.3	1.0
	S	22	1:00	7:52	14:04	19:24
			5.1	0.0	3.3	1.0
N	M	23	1:48	8:47	15:01	20:14
○			5.5	—0.4	3.2	1.0
	Tu	24	2:36	9:40	15:57	21:06
			5.8	—0.8	3.2	1.0
P	W	25	3:26	10:31	16:50	21:59
			6.0	—1.1	3.3	1.0
	Th	26	4:19	11:22	17:41	22:52
			6.2	—1.2	3.3	1.0
	F	27	5:11	12:12	18:32	23:49
			6.1	—1.1	3.4	0.9
	S	28	6:06	13:01	19:23	. . .
			5.9	—0.9	3.7	. . .
	S	29	0.47	7:01	13:50	20:13
			0.9	5.6	—0.6	3.9
E	M	30	1:50	8:08	14:40	21:05
☾			0.9	5.2	—0.3	4.1
	Tu	31	2:58	9.08	15:28	21:52
			0.8	4.7	0.1	4.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	0:30 0.5	6:25 2.8	12:15 0.3	18:58 4.4
	Tu	2	1:32 0.2	7:25 2.9	13:09 0.2	19:42 4.9
N	W	3	2:28 0.0	8:20 2.9	14:00 0.0	20:32 5.2
○ P	Th	4	3:18 −0.3	9:13 3.0	14:50 −0.1	21:22 5.4
	F	5	4:07 −0.4	10:02 3.1	15:40 −0.2	22:10 5.5
	S	6	4:54 −0.7	10:52 3.2	16:33 −0.1	22:59 5.3
	S	7	5:41 −0.7	11:42 3.3	17:20 0.0	23:48 5.1
	M	8	6:28 −0.6	12:32 3.3	18:15 0.2	. . . . .
E	Tu	9	0:37 4.7	7:14 −0.4	13:27 3.3	19:12 0.4
	W	10	1:29 4.2	8:03 −0.2	14:23 3.4	20:16 0.7
☾	Th	11	2:27 3.7	8:58 0.1	15:20 3.5	21:28 0.7
	F	12	3:30 3.2	9:46 0.4	16:24 3.6	22:48 0.9
	S	13	4:38 2.8	10:42 0.5	17:27 3.7	. . . . .
	S	14	0:07 0.9	5:50 2.6	11:38 0.6	18:23 3.9
	M	15	1:15 0.8	6:52 2.5	12:53 0.6	19:15 4.1
	Tu	16	2:10 0.6	7:48 2.5	13:20 0.6	19:58 4.3
S A	W	17	2:56 0.4	8:35 2.5	14:03 0.6	20:37 4.4
	Th	18	3:32 0.3	9:13 2.6	14:40 0.6	21:15 4.5
●	F	19	4:03 0.2	9:49 2.6	15:17 0.6	21:46 4.5
	S	20	4:32 0.1	10:22 2.7	15:50 0.6	22:17 4.4
	S	21	5:00 0.0	10:53 2.7	16:22 0.6	22:49 4.4
	M	22	5:29 0.1	11:27 2.8	16:57 0.6	23:20 4.2
	Tu	23	5:57 0.1	12:00 2.9	17:35 0.7	23:56 4.0
E	W	24	6:30 0.2	12:36 3.0	18:20 0.8	. . . . .
	Th	25	0:35 3.6	7:02 0.3	13:17 3.2	19:12 0.9
	F	26	1:20 3.3	7:42 0.4	14:08 3.3	20:12 1.0
☽	S	27	2:18 2.9	8:35 0.6	15:08 3.4	21:32 1.0
	S	28	3:28 2.6	9:33 0.7	16:18 3.7	23:00 0.9
	M	29	4:50 2.5	9:43 0.8	17:28 4.0	. . . . .
	Tu	30	0:22 0.7	6:10 2.5	11:52 0.6	18:32 4.4
N	W	31	1:26 0.3	7:17 2.6	12:54 0.3	19:30 4.8

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	2:20 −0.1	8:13 2.9	13:50 0.1	20:21 5.2
○	F	2	3:07 −0.4	9:02 3.1	14:42 −0.2	21:10 5.4
	S	3	3:50 −0.8	9:48 3.4	15:32 −0.3	21:56 5.4
	S	4	4:32 −0.8	10:32 3.6	16:20 −0.4	22:42 5.3
	M	5	5:12 −0.8	11:17 3.8	17:07 −0.3	23:26 5.0
E	Tu	6	5:55 −0.6	12:02 3.9	17:55 −0.1	. . . . .
	W	7	0:10 4.5	6:34 −0.4	12:49 3.8	18:48 0.2
	Th	8	1:00 3.9	7:15 −0.3	13:35 3.7	19:46 0.6
☾	F	9	1:50 3.3	8:01 0.3	14:32 3.6	20:52 0.9
	S	10	2:48 2.8	8:53 0.6	15:38 3.6	22:18 1.1
	S	11	4:01 2.4	9:54 0.8	16:48 3.6	23:52 1.1
	M	12	5:26 2.2	11:06 0.9	17:55 3.7	. . . . .
S	Tu	13	1:07 0.9	6:45 2.2	12:08 0.9	18:58 3.9
A	W	14	1:59 0.7	7:38 2.4	13:03 0.9	19:38 4.0
	Th	15	2:38 0.6	8:22 2.6	13:48 0.7	20:17 4.2
	F	16	3:07 0.3	8:56 2.7	14:28 0.6	20:50 4.3
	S	17	3:32 0.0	9:27 2.9	15:02 0.5	21:23 4.4
●	S	18	3:58 0.0	9:55 3.1	15:36 0.4	21:54 4.4
	M	19	4:24 −0.1	10:24 3.2	16:10 0.3	22:25 4.3
E	Tu	20	4:51 −0.1	10:58 3.4	16:43 0.3	23:00 4.1
	W	21	5:18 0.0	11:26 3.5	17:22 0.3	23:33 3.9
	Th	22	5:48 0.1	11:58 3.6	18:04 0.4	. . . . .
	F	23	0:15 3.5	6:24 0.3	12:38 3.6	18:50 0.6
	S	24	0:55 3.1	7:08 0.5	13:28 3.7	19:58 0.8
☽	S	25	1:52 2.7	7:51 0.7	14:32 3.7	21:16 0.9
	M	26	3:11 2.4	8:55 0.9	15:48 3.7	22:52 0.8
N	Tu	27	4:45 2.2	10:18 0.9	17:08 4.0	. . . . .
	W	28	0:14 0.6	6:08 2.4	11:39 0.7	18:18 4.3
	Th	29	1:14 0.2	7:10 2.7	12:45 0.4	19:15 4.7

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	2:03 −0.1	8:09 3.1	13:42 0.1	20:07 5.0
	S	2	2:42 −0.4	8:45 3.5	14:32 −0.3	20:54 5.1
○	S	3	3:24 −0.7	9:27 3.9	15:20 −0.5	21:37 5.1
E	M	4	4:02 −0.8	10:07 4.1	16:05 −0.6	22:19 4.9
	Tu	5	4:40 −0.7	10:48 4.3	16:51 −0.4	23:02 4.5
	W	6	5:16 −0.5	11:28 4.3	17:38 −0.2	23:46 4.1
	Th	7	5:56 −0.2	12:10 4.1	18:21 0.1	. . . . .
	F	8	0:29 3.5	6:34 0.1	12:58 4.0	19:14 0.5
	S	9	1:15 3.0	7:13 0.5	13:46 3.7	20:20 0.9
☾	S	10	2:10 2.5	8:00 0.8	14:48 3.5	21:45 1.1
S	M	11	3:29 2.2	9:08 1.1	16:02 3.4	23:25 1.1
A	Tu	12	5:08 2.1	10:27 1.3	17:18 3.4	. . . . .
	W	13	0:37 0.9	6:28 2.2	11:48 1.2	18:18 3.6
	Th	14	1:28 0.7	7:19 2.5	12:41 1.0	19:05 3.8
	F	15	1:55 0.4	7:55 2.7	13:26 0.8	19:45 4.0
	S	16	2:24 0.2	8:24 3.0	14:06 0.6	20:18 4.1
	S	17	2:50 0.0	8:52 3.3	14:42 0.3	20:52 4.2
●	M	18	3:17 −0.1	9:21 3.5	15:12 0.1	21:27 4.2
E	Tu	19	3:45 −0.1	9:51 3.8	15:50 0.0	22:11 4.1
	W	20	4:15 −0.1	10:22 4.0	16:30 0.0	22:38 3.9
	Th	21	4:48 0.0	10:58 4.0	17:07 0.0	23:15 3.6
	F	22	5:17 0.2	11:31 4.1	17:50 0.1	23:56 3.2
	S	23	5:51 0.4	12:12 4.1	18:45 0.4	. . . . .
	S	24	0:45 2.8	6:32 0.6	13:05 4.0	19:52 0.6
N ☽	M	25	1:49 2.4	7:23 0.8	14:10 3.9	21:17 0.7
	Tu	26	3:15 2.2	8:40 1.1	15:32 3.8	22:45 0.6
	W	27	4:50 2.3	10:10 1.0	16:51 4.0	23:57 0.6
P	Th	28	6:02 2.6	11:32 0.8	18:00 4.2	. . . . .
	F	29	0:50 0.0	6:56 3.0	12:37 0.4	18:57 4.5
	S	30	1:35 −0.4	7:40 3.5	13:32 0.0	19:47 4.6
	S	31	2:15 −0.5	8:22 3.9	14:22 −0.3	20:34 4.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	2:52 −0.6	9:01 4.3	15:07 −0.5	21:18 4.5
	Tu	2	3:30 −0.6	9:40 4.5	15:52 −0.6	22:00 4.3
	W	3	4:07 −0.4	10:18 4.5	16:32 −0.4	22:40 4.0
	Th	4	4:40 −0.2	10:55 4.5	17:16 −0.1	23:18 3.5
	F	5	5:15 0.1	11:35 4.3	18:02 0.2	. . . . .
	S	6	0:00 3.0	5:50 0.4	12:18 4.1	18:54 0.5
	S	7	0:46 2.6	6:27 0.7	13:06 3.8	19:55 0.8
S	M	8	1:48 2.3	7:12 1.0	14:02 3.5	21:12 1.0
☾ A	Tu	9	3:05 2.1	8:15 1.3	15:12 3.3	22:35 1.0
	W	10	4:41 2.0	9:42 1.5	16:22 3.3	23:40 0.8
	Th	11	5:51 2.3	11:08 1.6	17:27 3.3	. . . . .
	F	12	0:25 0.6	6:36 2.6	12:05 1.2	18:17 3.5
	S	13	1:00 0.4	7:10 3.0	12:54 0.9	19:00 3.7
	S	14	1:30 0.2	7:42 3.3	13:35 0.6	19:43 3.8
E	M	15	2:00 0.1	8:12 3.7	14:15 0.3	20:22 3.9
	Tu	16	2:35 0.0	8:44 3.9	14:54 0.0	21:00 3.9
●	W	17	3:06 0.0	9:17 4.2	15:31 −0.2	21:38 3.8
	Th	18	3:37 0.0	9:51 4.4	16:18 −0.2	22:18 3.5
	F	19	4:12 0.1	10:28 4.5	16:58 −0.2	23:01 3.2
	S	20	4:47 0.3	11:10 4.5	17:48 −0.1	23:50 2.9
	S	21	5:27 0.5	11:58 4.4	18:47 0.1	. . . . .
N P	M	22	0:45 2.6	6:15 0.7	12:53 4.2	19:55 0.8
	Tu	23	1:57 2.3	7:17 0.9	14:00 4.1	21:10 0.4
☽	W	24	3:18 2.3	8:35 1.1	15:15 4.0	22:23 0.3
	Th	25	4:37 2.5	10:02 1.0	16:30 4.0	23:35 0.1
	F	26	5:40 2.9	11:20 0.7	17:36 4.0	. . . . .
	S	27	0:15 0.0	6:31 3.4	12:25 0.4	18:33 4.1
E	S	28	1:00 −0.2	7:15 3.9	13:20 0.1	19:27 4.1
	M	29	1:40 −0.2	7:58 4.2	14:07 −0.3	20:12 4.0
	Tu	30	2:22 −0.3	8:33 4.4	14:52 −0.3	20:55 3.9
MAY.						
○	W	1	2:57 −0.2	9:12 4.6	15:37 −0.3	21:37 3.6
	Th	2	3:31 −0.1	9:51 4.7	16:20 −0.2	22:17 3.3
	F	3	4:07 0.1	10:30 4.6	17:05 0.0	22:57 3.0
	S	4	4:38 0.3	11:08 4.4	17:52 0.2	23:40 2.6
S	S	5	5:13 0.6	11:50 4.2	18:40 0.5	. . . . .
	M	6	0:27 2.4	5:50 0.9	12:33 3.9	19:34 0.7
A	Tu	7	1:24 2.2	6:35 1.2	13:22 3.6	20:32 0.8
	W	8	2:35 2.1	7:32 1.4	14:17 3.4	21:34 0.8
☾	Th	9	3:52 2.1	8:50 1.5	15:19 3.3	22:30 0.7
	F	10	4:55 2.4	10:10 1.5	16:22 3.2	23:15 0.6
	S	11	5:40 2.8	11:17 1.2	17:20 3.3	23:54 0.5
E	S	12	6:16 3.1	12:12 0.9	18:14 3.3	. . . . .
	M	13	0:32 0.3	6:50 3.5	13:02 0.6	19:01 3.4
	Tu	14	1:12 0.2	7:27 3.9	13:45 0.2	19:46 3.5
	W	15	1:50 0.1	8:05 4.3	14:30 −0.1	20:30 3.4
●	Th	16	2:27 0.0	8:45 4.6	15:17 −0.2	21:18 3.3
	F	17	3:07 0.1	9:28 4.8	16:06 −0.3	22:02 3.1
	S	18	3:45 0.1	10:12 4.9	16:56 −0.4	22:52 2.9
N P	S	19	4:28 0.3	10:59 4.9	17:47 −0.3	23:45 2.7
	M	20	5:15 0.4	11:50 4.8	18:45 −0.2	. . . . .
	Tu	21	0:46 2.6	6:09 0.6	12:47 4.6	19:47 −0.1
	W	22	1:52 2.6	7:15 0.8	13:49 4.3	20:48 0.0
☽	Th	23	3:03 2.7	8:28 0.9	14:55 4.1	21:50 0.0
	F	24	4:10 2.9	9:48 0.9	16:02 3.9	22:44 0.0
E	S	25	5:08 3.3	11:00 0.7	17:07 3.7	23:35 0.0
	S	26	5:57 3.7	12:07 0.4	18:10 3.6	. . . . .
	M	27	0:20 0.0	6:45 4.0	13:08 0.2	19:02 3.5
	Tu	28	1:07 0.0	7:29 4.3	13:55 0.1	19:50 3.3
	W	29	1:48 0.0	8:10 4.5	14:45 0.1	20:35 3.1
○	Th	30	2:25 0.1	8:52 4.7	15:30 0.1	21:20 3.0
	F	31	3:02 0.2	9:31 4.7	16:15 0.2	22:02 2.8
JUNE.						
S	S	1	3:38 0.3	10:10 4.6	16:58 0.3	22:43 2.6
	S	2	4:13 0.5	10:49 4.4	17:40 0.2	23:25 2.4
	M	3	4:48 0.7	11:27 4.4	18:22 0.4	. . . . .
A	Tu	4	0:10 2.3	5:25 0.9	12:05 4.0	19:05 0.4
	W	5	1:00 2.2	6:08 1.1	12:47 3.8	19:50 0.5
	Th	6	1:55 2.2	6:59 1.3	13:31 3.6	20:33 0.5
☾	F	7	2:50 2.4	8:00 1.4	14:23 3.4	21:18 0.6
	S	8	3:43 2.6	9:08 1.4	15:23 3.2	22:01 0.6
E	S	9	4:30 2.9	10:23 1.2	16:23 3.1	22:47 0.5
	M	10	5:17 3.3	11:30 1.0	17:28 3.0	23:37 0.4
	Tu	11	6:05 3.7	12:27 0.6	18:21 3.0	. . . . .
	W	12	0:25 0.3	6:50 4.1	13:21 0.3	19:17 3.0
	Th	13	1:10 0.2	7:38 4.5	14:14 0.0	20:09 3.0
	F	14	1:56 0.1	8:23 4.8	15:07 −0.3	21:01 3.0
● N	S	15	2:42 0.1	9:12 5.1	15:58 −0.4	21:52 3.0
P	S	16	3:29 0.1	10:00 5.2	16:48 −0.6	22:45 2.9
	M	17	4:18 0.1	10:49 5.2	17:38 −0.6	23:37 2.9
	Tu	18	5:10 0.2	11:40 5.0	18:30 −0.5	. . . . .
	W	19	0:33 2.9	6:05 0.4	12:35 4.8	19:22 −0.4
	Th	20	1:32 3.0	7:05 0.5	13:30 4.4	20:13 −0.2
☽ E	F	21	2:32 3.1	8:12 0.6	14:28 4.0	21:07 −0.1
	S	22	3:30 3.3	9:23 0.7	15:33 3.6	22:00 0.1
	S	23	4:27 3.6	10:37 0.7	16:39 3.3	22:52 0.2
	M	24	5:25 3.8	11:48 0.6	17:41 3.0	23:45 0.2
	Tu	25	6:18 4.1	12:58 0.6	18:40 2.9	. . . . .
	W	26	0:32 0.3	7:08 4.3	13:52 0.5	19:35 2.8
	Th	27	1:20 0.3	7:55 4.5	14:43 0.3	20:25 2.7
S	F	28	2:02 0.3	8:37 4.6	15:20 0.2	21:10 2.6
○	S	29	2:42 0.4	9:17 4.6	16:09 0.2	21:52 2.6
	S	30	3:20 0.6	9:53 4.6	16:45 0.3	22:32 2.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	JANUARY. Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	FEBRUARY. Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	MARCH. Time and Height of High and Low Water.			
	M	1	6:18	12:34	18:50	. . .	P	Th	1	1:37	8:05	14:18	20:32	P	F	1	1:27	7:50	14:06	20:20
			2.1	12.8	2.8	. . .				13.9	1.0	14.0	1.7				13.3	1.6	13.8	1.8
	Tu	2	0:57	7:28	13:37	19:50	○	F	2	2:38	9:00	15:15	21:28		S	2	2:30	8:47	15:02	21:16
			13.9	1.3	13.6	2.1				14.7	0.1	15.0	0.7				14.3	0.5	15.0	0.6
N	W	3	1:55	8:22	14:34	20:46		S	3	3:32	9:58	16:05	22:20	○	S	3	3:28	9:38	15:50	22:04
			14.7	0.4	14.5	1.3				15.5	—0.8	16.0	—0.1				15.3	—0.4	16.1	—0.3
○ P	Th	4	2:50	9:14	15:26	21:38		S	4	4:22	10:41	16:52	23:06	E	M	4	4:11	10:25	16:35	22:50
			15.3	—0.5	15.3	0.6				16.1	—1.3	16.6	—0.6				16.1	—1.0	16.7	—0.9
	F	5	3:42	10:05	16:16	22:30		M	5	5:10	11:28	17:38	23:53		Tu	5	4:55	11:08	17:17	23:33
			15.9	—1.0	16.0	0.1				16.4	—1.4	16.9	—0.7				16.4	—1.2	16.9	—1.1
	S	6	4:31	10:54	17:05	23:20	E	Tu	6	5:56	12:14	18:22	. . .		W	6	5:40	11:57	17:58	. . .
			16.2	—1.3	16.4	—0.1				16.2	—1.1	16.6	. . .				16.4	—0.9	16.7	. . .
	S	7	5:21	11:42	17:58	. . .		W	7	0:39	6:42	12:57	19:06		Th	7	0:15	6:20	12:32	18:38
			16.2	—1.3	16.4	. . .				—0.5	15.7	—0.3	16.0				—0.8	15.8	— 0.1	16.0
	M	8	0:09	6:10	12:30	18:41		Th	8	1:25	7:28	13:43	19:51		F	8	0:57	7:01	13:15	19:20
			—0.1	15.8	—0.8	16.1				0.2	14.8	0.8	15.1				0.0	14.8	1.0	14.9
E	Tu	9	0:59	7:01	13:20	19:31	☾	F	9	2:14	8:15	14:31	20:40		S	9	1:40	7:44	13:58	20:01
			0.2	15.2	0.0	15.5				1.1	13.6	2.1	13.9				1.0	13.7	2.4	13.6
	W	10	1:50	7:52	14:12	20:23		S	10	3:04	9:08	15:24	21:31	☾	S	10	2:26	8:30	14:47	20:49
			0.8	14.4	1.0	14.7				2.2	12.4	3.4	12.7				2.3	12.4	3.7	12.4
☾	Th	11	2:44	8:48	15:05	21:19		S	11	4:02	10:10	16:26	22:34	S	M	11	3:20	9:25	15:46	21:44
			1.6	13.4	2.0	13.8				3.2	11.4	4.4	11.7				3.4	11.3	4.8	11.2
	F	12	3:42	9:50	16:05	22:17		M	12	5:08	11:30	17:37	23:48	A	Tu	12	4:24	10:38	17:00	23:02
			2.3	12.4	3.0	13.0				3.9	10.7	5.0	11.2				4.3	10.4	4.5	10.6
	S	13	4:44	11:00	17:10	23:21	S	Tu	13	6:16	12:53	18:52	. . .		W	13	5:36	12:08	18:18	. . .
			3.0	11.7	3.8	12.4				4.1	10.7	5.0	. . .				4.7	10.3	5.5	. . .
	S	14	5:50	12:15	18:16	. . .	A	W	14	1:01	7:21	14:00	19:56		Th	14	0:27	6:45	13:20	19:25
			3.3	11.4	4.1	. . .				11.3	3.9	11.2	4.6				10.6	4.5	10.8	5.0
	M	15	0:28	6:53	13:25	19:21		Th	15	2:01	8:15	14:45	20:44		F	15	1:38	7:41	14:08	20:13
			12.2	3.3	11.5	4.1				11.8	3.3	11.9	4.0				11.2	3.8	11.7	4.1
	Tu	16	1:30	7:50	14:22	20:17		F	16	2:48	8:59	15:20	21:24		S	16	2:20	8:27	14:44	20:52
			12.4	2.9	11.9	3.8				12.4	2.6	12.7	3.2				12.0	3.0	12.7	3.0
S A	W	17	2:23	8:38	15:06	21:04		S	17	3:26	9:37	15:52	21:59		S	17	2:58	9:06	15:16	21:27
			12.7	2.5	12.4	3.4				13.0	1.8	13.5	2.3				12.9	2.1	13.7	2.0
	Th	18	3:06	9:21	15:44	21:45	●	S	18	4:01	10:12	16:21	22:32	●	M	18	3:31	9:41	15:48	22:02
			13.0	2.0	12.9	3.0				13.7	1.2	14.3	1.6				13.8	1.2	14.7	1.0
●	F	19	3:46	10:00	16:16	22:21		M	19	4:32	10:46	16:52	23:06	E	Tu	19	4:08	10:16	16:19	22:36
			13.4	1.5	13.4	2.6				14.2	0.7	14.9	1.0				14.6	0.6	15.4	0.2
	S	20	4:21	10:36	16:48	22:58	E	Tu	20	5:06	11:20	17:22	23:40		W	20	4:37	10:50	16:58	23:10
			13.6	1.2	13.9	2.2				14.7	0.4	15.4	0.4				15.3	0.1	16.0	—0.3
	S	21	4:54	11:11	17:18	23:30		W	21	5:37	11:54	17:55	. . .		Th	21	5:11	11:25	17:26	23:47
			13.8	1.0	14.3	1.9				15.0	0.4	15.7	. . .				15.6	0.0	16.2	—0.4
	M	22	5:26	11:46	17:50	. . .		Th	22	0:15	6:10	12:27	18:30		F	22	5:47	12:02	18:02	. . .
			14.0	0.9	14.6	. . .				0.4	15.0	0.6	15.7				15.7	0.2	16.1	. . .
	Tu	23	0:05	6:00	12:20	18:23		F	23	0:51	6:47	13:08	19:07		S	23	0:25	6:24	12:40	18:42
			1.7	14.1	1.1	14.7				0.5	14.9	1.1	15.3				—0.3	15.5	0.8	15.7
E	W	24	0:41	6:34	12:54	18:58		S	24	1:30	7:25	13:43	19:48		S	24	1:06	7:06	13:21	19:24
			1.6	14.1	1.4	14.7				0.9	14.4	1.8	14.7				0.3	14.9	1.6	14.9
	Th	25	1:20	7:12	13:32	19:37	☽	S	25	2:16	8:12	14:28	20:35	N	M	25	1:52	7:52	14:09	20:14
			1.6	13.9	1.8	14.5				1.5	13.8	2.6	13.9	☽			1.1	14.9	2.5	13.9
	F	26	2:00	7:53	14:12	20:19		M	26	3:10	9:06	15:26	21:33		Tu	26	2:47	8:49	15:10	21:14
			1.8	13.6	2.3	14.1				2.2	13.0	3.4	13.1				2.0	13.2	3.3	12.9
☽	S	27	2:47	8:40	15:00	21:08	N	Tu	27	4:14	10:14	16:41	22:48		W	27	3:58	10:00	16:27	22:32
			2.2	13.2	2.9	13.6				2.8	12.3	3.9	12.5				2.8	12.4	3.8	12.2
	S	28	3:42	9:38	15:58	22:07		W	28	5:27	11:37	18:04	. . .	P	Th	28	5:08	11:24	17:52	. . .
			2.5	12.7	3.4	13.2				2.9	12.1	3.8	. . .				3.1	12.2	3.7	. . .
	M	29	4:46	10:44	17:07	23:16		Th	29	0:09	6:42	13:00	19:19		F	29	0:00	6:26	12:45	19:05
			2.7	12.8	3.6	13.0				12.6	2.5	12.7	3.0				12.3	2.7	12.8	2.9
	Tu	30	5:54	12:01	18:21	. . .									S	30	1:16	7:32	13:50	20:06
			2.5	12.4	3.4	. . .											13.1	1.8	13.9	1.7
N	W	31	0:29	7:02	13:14	19:31									S	31	2:17	8:29	14:43	20:59
			13.2	1.9	13.0	2.7											14.1	0.8	15.0	0.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E	M	1	3:09	9:18	15:30	21:44
C			15.1	0.0	15.9	−0.4
	Tu	2	3:54	10:04	16:12	22:28
			15.8	−0.5	16.4	−0.9
	W	3	4:36	10:47	16:52	23:10
			16.1	−0.5	16.5	−1.0
	Th	4	5:17	11:28	17:32	23:49
			15.9	−0.2	16.1	−0.6
	F	5	5:57	12:06	18:10	. . .
			15.3	0.6	15.4	. . .
	S	6	0:31	6:36	12:48	18:48
			0.2	14.5	1.6	14.4
	S	7	1:12	7:16	13:30	19:28
			1.2	13.5	2.8	13.2
S	M	8	1:54	7:59	14:16	20:10
			2.4	12.4	4.0	12.1
☾	Tu	9	2:43	8:48	15:12	21:03
A			3.5	11.4	4.9	11.0
	W	10	3:41	9:52	16:20	22:13
			4.4	10.7	5.5	10.4
	Th	11	4:52	11:10	17:38	23:38
			4.8	10.5	5.4	10.3
	F	12	5:58	12:20	18:40	. . .
			4.7	10.9	4.9	. . .
	S	13	0:47	6:56	13:14	19:30
			10.9	4.1	11.7	3.9
	S	14	1:38	7:44	13:55	20:11
			11.7	3.2	12.7	2.8
E	M	15	2:19	8:25	14:33	20:50
			12.8	2.3	13.7	1.6
	Tu	16	2:55	9:05	15:08	21:28
			13.8	1.4	14.8	0.5
●	W	17	3:31	9:42	15:45	22:05
			14.8	0.7	15.6	−0.3
	Th	18	4:07	10:20	16:21	22:43
			15.5	0.2	16.2	−0.8
	F	19	4:45	10:59	16:58	23:22
			15.9	0.0	16.4	−0.9
	S	20	5:25	11:38	17:38	. . .
			16.0	0.2	16.1	. . .
	S	21	0:04	6:06	12:21	18:21
			−0.6	15.7	0.7	15.6
N	M	22	0:48	6:51	13:08	19:08
P			0.0	15.1	1.5	14.7
	Tu	23	1:37	7:42	14:00	20:00
			0.9	14.3	2.4	13.7
☽	W	24	2:33	8:40	15:05	21:05
			1.9	13.4	3.1	12.8
	Th	25	3:38	9:52	16:20	22:24
			2.6	12.8	3.5	12.2
	F	26	4:53	11:12	17:38	23:47
			2.9	12.7	3.3	12.3
	S	27	6:06	12:24	18:46	. . .
			2.7	13.2	2.6	. . .
E	S	28	1:00	7:11	13:27	19:45
			13.0	2.1	13.9	1.6
	M	29	2:00	8:06	14:20	20:36
			13.8	1.4	14.7	0.7
	Tu	30	2:50	8:56	15:06	21:21
			14.6	0.8	15.4	0.0
MAY.						
○	W	1	3:35	9:40	15:47	22:04
			15.0	0.5	15.7	−0.4
	Th	2	4:17	10:23	16:27	22:45
			15.2	0.5	15.6	−0.4
	F	3	4:55	11:05	17:05	23:25
			15.0	0.9	15.3	0.0
	S	4	5:34	11:45	17:43	. . .
			14.6	1.5	14.6	. . .
S	S	5	0:06	6:12	12:25	18:21
			0.6	14.0	2.3	13.8
	M	6	0:46	6:51	13:06	19:00
			1.5	13.3	3.1	12.9
A	Tu	7	1:28	7:33	13:52	19:41
			2.4	12.5	4.0	12.0
	W	8	2:13	8:20	14:42	20:30
			3.4	11.8	4.6	11.3
☾	Th	9	3:05	9:12	15:40	21:27
			4.1	11.4	5.0	10.7
	F	10	4:04	10:13	16:43	22:38
			4.5	11.2	4.9	10.6
	S	11	5:05	11:16	17:45	23:46
			4.5	11.5	4.4	11.0
E	S	12	6:02	12:12	18:37	. . .
			4.1	12.0	3.6	. . .
	M	13	0:43	6:58	13:00	19:23
			11.8	3.4	12.9	2.5
	Tu	14	1:30	7:40	13:46	20:09
			12.7	2.6	13.8	1.5
	W	15	2:16	8:25	14:28	20:52
			13.7	1.7	14.8	0.4
●	Th	16	2:57	9:08	15:13	21:35
			14.6	1.0	15.6	−0.4
	F	17	3:40	9:52	15:53	22:17
			15.3	0.5	16.0	−0.8
	S	18	4:22	10:35	16:36	23:00
			15.8	0.3	16.2	−1.0
N	S	19	5:07	11:20	17:20	23:47
P			16.0	0.4	16.0	−0.8
	M	20	5:52	12:09	18:07	. . .
			15.8	0.7	15.5	. . .
	Tu	21	0:35	6:42	13:00	18:57
			−0.2	15.3	1.3	14.7
	W	22	1:27	7:35	13:55	19:53
			0.6	14.6	1.9	13.8
☽	Th	23	2:22	8:34	14:58	21:00
			1.4	14.0	2.5	13.1
	F	24	3:25	9:40	16:07	22:12
			2.1	13.4	2.8	12.6
E	S	25	4:33	10:50	17:15	23:27
			2.6	13.3	2.7	12.5
	S	26	5:40	11:58	18:20	. . .
			2.6	13.4	2.4	. . .
	M	27	0:37	6:43	12:57	19:18
			12.8	2.5	13.7	1.8
	Tu	28	1:37	7:40	13:52	20:10
			13.2	2.1	14.2	1.2
	W	29	2:28	8:30	14:40	20:57
			13.7	1.8	14.5	0.7
○	Th	30	3:16	9:18	15:24	21:41
			14.0	1.7	14.7	0.5
	F	31	3:58	10:02	16:05	22:25
			14.2	1.7	14.7	0.4
JUNE.						
S	S	1	4:37	10:43	16:44	23:04
			14.1	1.9	14.4	0.7
	S	2	5:15	11:25	17:22	23:45
			14.0	2.2	13.9	1.1
	M	3	5:55	12:05	17:59	. . .
			13.6	2.7	13.4	. . .
A	Tu	4	0:24	6:30	12:45	18:37
			1.6	13.3	3.1	12.8
	W	5	1:08	7:10	13:27	19:15
			2.3	12.9	3.5	12.3
	Th	6	1:47	7:50	14:13	19:58
			2.9	12.6	3.9	11.8
☾	F	7	2:30	8:35	15:02	20:47
			3.5	12.3	4.1	11.5
	S	8	3:18	9:25	15:55	21:42
			3.8	12.2	4.0	11.4
E	S	9	4:11	10:18	16:50	22:43
			4.0	12.2	3.8	11.5
	M	10	5:07	11:12	17:45	23:45
			3.9	12.5	3.2	11.9
	Tu	11	6:02	12:08	18:38	. . .
			3.5	13.0	2.4	. . .
	W	12	0:42	6:56	13:02	19:30
			12.6	3.0	13.8	1.5
	Th	13	1:36	7:48	13:53	20:20
			13.4	2.2	14.5	0.6
	F	14	2:27	8:38	14:43	21:08
			14.3	1.5	15.2	−0.2
●	S	15	3:17	9:28	15:32	21:55
N			15.0	0.9	15.7	−0.7
P	S	16	4:05	10:17	16:18	22:43
			15.6	0.5	16.0	−1.0
	M	17	4:58	11:08	17:08	23:32
			16.0	0.3	15.9	−0.9
	Tu	18	5:42	11:58	17:57	. . .
			16.0	0.4	15.6	. . .
	W	19	0:22	6:32	12:50	18:49
			−0.5	15.7	0.7	15.0
	Th	20	1:13	7:25	13:45	19:45
			0.1	15.3	1.1	14.3
☽	F	21	2:07	8:20	14:42	20:43
E			0.8	14.7	1.6	13.6
	S	22	3:06	9:18	15:43	21:48
			1.6	14.1	2.1	13.0
	S	23	4:07	10:20	16:47	22:58
			2.3	13.6	2.3	12.5
	M	24	5:10	11:23	17:50	. . .
			2.8	13.2	2.5	. . .
	Tu	25	0:07	6:13	12:25	18:50
			12.3	3.1	13.2	2.3
	W	26	1:12	7:13	13:24	19:45
			12.4	3.1	13.3	2.0
	Th	27	2:10	8:09	14:18	20:35
			12.7	3.0	13.5	1.7
S	F	28	2:58	8:59	15:05	21:21
			13.0	2.7	13.7	1.3
○	S	29	3:43	9:46	15:48	22:05
			13.3	2.6	13.8	1.2
	S	30	4:22	10:28	16:27	22:45
			13.5	2.5	13.8	1.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	6:18	12:34	18:50	. . .
			2.1	12.8	2.8	. . .
	Tu	2	0:57	7:28	13:37	19:50
			13.9	1.3	13.6	2.1
N	W	3	1:55	8:22	14:34	20:46
			14.7	0.4	14.5	1.3
○ P	Th	4	2:50	9:14	15:26	21:38
			15.3	—0.5	15.3	0.6
	F	5	3:42	10:05	16:16	22:30
			15.9	—1.0	16.0	0.1
	S	6	4:31	10:54	17:05	23:20
			16.2	—1.3	16.4	—0.1
	S	7	5:21	11:42	17:53	. . .
			16.2	—1.3	16.4	. . .
	M	8	0:09	6:10	12:30	18:41
			—0.1	15.8	—0.8	16.1
E	Tu	9	0:59	7:01	13:20	19:31
			0.2	15.2	0.0	15.5
	W	10	1:50	7:52	14:12	20:23
			0.8	14.4	1.0	14.7
☾	Th	11	2:44	8:48	15:05	21:19
			1.6	13.4	2.0	13.8
	F	12	3:42	9:50	16:05	22:17
			2.3	12.4	3.0	13.0
	S	13	4:44	11:00	17:10	23:21
			3.0	11.7	3.8	12.4
	S	14	5:50	12:15	18:16	. . .
			3.3	11.4	4.1	. . .
	M	15	0:28	6:53	13:25	19:21
			12.2	3.3	11.5	4.1
	Tu	16	1:30	7:50	14:22	20:17
			12.4	2.9	11.9	3.8
S A	W	17	2:23	8:38	15:06	21:04
			12.7	2.5	12.4	3.4
	Th	18	3:06	9:21	15:44	21:45
			13.0	2.0	12.9	3.0
●	F	19	3:46	10:00	16:16	22:21
			13.4	1.5	13.4	2.6
	S	20	4:21	10:36	16:48	22:58
			13.6	1.2	13.9	2.2
	S	21	4:54	11:11	17:18	23:30
			13.8	1.0	14.3	1.9
	M	22	5:26	11:46	17:50	. . .
			14.0	0.9	14.6	. . .
	Tu	23	0:05	6:00	12:20	18:23
			1.7	14.1	1.1	14.7
E	W	24	0:41	6:34	12:54	18:58
			1.6	14.1	1.4	14.7
	Th	25	1:20	7:12	13:32	19:37
			1.6	13.9	1.8	14.5
	F	26	2:00	7:53	14:12	20:19
			1.8	13.6	2.3	14.1
☽	S	27	2:47	8:40	15:00	21:08
			2.2	13.2	2.9	13.6
	S	28	3:42	9:38	15:58	22:07
			2.5	12.7	3.4	13.2
	M	29	4:46	10:44	17:07	23:16
			2.7	12.3	3.6	13.0
	Tu	30	5:54	12:01	18:21	. . .
			2.5	12.4	3.4	. . .
N	W	31	0:29	7:02	13:14	19:31
			13.2	1.9	13.0	2.7

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	1:37	8:05	14:18	20:32
			13.9	1.0	14.0	1.7
○	F	2	2:38	9:00	15:15	21:28
			14.7	0.1	15.0	0.7
	S	3	3:32	9:53	16:05	22:20
			15.5	—0.8	16.0	—0.1
	S	4	4:22	10:41	16:52	23:06
			16.1	—1.3	16.6	—0.6
	M	5	5:10	11:28	17:38	23:53
			16.4	—1.4	16.9	—0.7
E	Tu	6	5:56	12:14	18:22	. . .
			16.2	—1.1	16.6	. . .
	W	7	0:39	6:42	12:57	19:06
			—0.5	15.7	—0.3	16.0
	Th	8	1:25	7:28	13:43	19:51
			0.2	14.8	0.8	15.1
☾	F	9	2:14	8:15	14:31	20:40
			1.1	13.6	2.1	13.9
	S	10	3:04	9:08	15:24	21:31
			2.2	12.4	3.4	12.7
	S	11	4:02	10:10	16:26	22:34
			3.2	11.4	4.4	11.7
	M	12	5:08	11:30	17:37	23:48
			3.9	10.7	5.0	11.2
S	Tu	13	6:16	12:58	18:52	. . .
			4.1	10.7	5.0	. . .
A	W	14	1:01	7:21	14:00	19:56
			11.3	3.9	11.2	4.6
	Th	15	2:01	8:15	14:45	20:44
			11.8	3.3	11.9	4.0
	F	16	2:48	8:59	15:20	21:24
			12.4	2.6	12.7	3.2
	S	17	3:26	9:37	15:52	21:59
			13.0	1.8	13.5	2.3
●	S	18	4:01	10:12	16:21	22:32
			13.7	1.2	14.3	1.6
	M	19	4:32	10:46	16:52	23:06
			14.2	0.7	14.9	1.0
E	Tu	20	5:05	11:20	17:22	23:40
			14.7	0.4	15.4	0.4
	W	21	5:37	11:54	17:55	. . .
			15.0	0.4	15.7	. . .
	Th	22	0:15	6:10	12:27	18:30
			0.4	15.0	0.6	15.7
	F	23	0:51	6:47	13:03	19:07
			0.5	14.9	1.1	15.3
	S	24	1:30	7:25	13:43	19:48
			0.9	14.4	1.8	14.7
☽	S	25	2:16	8:12	14:28	20:35
			1.5	13.8	2.6	13.9
	M	26	3:10	9:06	15:26	21:33
			2.2	13.0	3.4	13.1
N	Tu	27	4:14	10:14	16:41	22:48
			2.8	12.3	3.9	12.5
	W	28	5:27	11:37	18:04	. . .
			2.9	12.1	3.8	. . .
	Th	29	0:09	6:42	13:00	19:19
			12.6	2.5	12.7	3.0

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	1:27	7:50	14:06	20:20
			13.3	1.6	13.8	1.8
	S	2	2:30	8:47	15:02	21:16
			14.3	0.5	15.0	0.6
○	S	3	3:23	9:38	15:50	22:04
			15.3	—0.4	16.1	—0.3
E	M	4	4:11	10:25	16:35	22:50
			16.1	—1.0	16.7	—0.9
	Tu	5	4:55	11:08	17:17	23:33
			16.4	—1.2	16.9	—1.1
	W	6	5:40	11:57	17:58	. . .
			16.4	—0.9	16.7	. . .
	Th	7	0:15	6:20	12:32	18:38
			—0.8	15.8	— 0.1	16.0
	F	8	0:57	7:01	13:15	19:20
			0.0	14.8	1.0	14.9
	S	9	1:40	7:44	13:58	20:01
			1.0	13.7	2.4	13.6
☾	S	10	2:26	8:30	14:47	20:49
			2.3	12.4	3.7	12.4
S	M	11	3:20	9:25	15:46	21:44
			3.4	11.3	4.8	11.2
A	Tu	12	4:24	10:38	17:00	23:02
			4.3	10.4	4.5	10.6
	W	13	5:36	12:08	18:18	. . .
			4.7	10.3	5.5	. . .
	Th	14	0:27	6:45	13:20	19:25
			10.6	4.5	10.8	5.0
	F	15	1:33	7:41	14:08	20:13
			11.2	3.8	11.7	4.1
	S	16	2:20	8:27	14:44	20:52
			12.0	3.0	12.7	3.0
	S	17	2:58	9:06	15:16	21:27
			12.9	2.1	13.7	2.0
●	M	18	3:31	9:41	15:48	22:02
			13.8	1.2	14.7	1.0
E	Tu	19	4:03	10:16	16:19	22:36
			14.6	0.6	15.4	0.2
	W	20	4:37	10:50	16:53	23:10
			15.3	0.1	16.0	—0.3
	Th	21	5:11	11:25	17:26	23:47
			15.6	0.0	16.2	—0.4
	F	22	5:47	12:02	18:02	. . .
			15.7	0.2	16.1	. . .
	S	23	0:25	6:24	12:40	18:42
			—0.3	15.5	0.8	15.7
	S	24	1:06	7:06	13:21	19:24
			0.3	14.9	1.6	14.9
N ☽	M	25	1:52	7:52	14:09	20:14
			1.1	14.9	2.5	13.9
	Tu	26	2:47	8:49	15:10	21:14
			2.0	13.2	3.3	12.9
	W	27	3:53	10:00	16:27	22:32
			2.8	12.4	3.8	12.2
P	Th	28	5:08	11:24	17:52	. . .
			3.1	12.2	3.7	. . .
	F	29	0:00	6:26	12:45	19:05
			12.3	2.7	12.8	2.9
	S	30	1:16	7:32	13:50	20:06
			13.1	1.8	13.9	1.7
	S	31	2:17	8:29	14:43	20:59
			14.1	0.8	15.0	0.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E	M	1	3:09	9:18	15:30	21:44
C			15.1	0.0	15.9	—0.4
	Tu	2	3:54	10:04	16:12	22:28
			15.8	—0.5	16.4	—0.9
	W	3	4:36	10:47	16:52	23:10
			16.1	—0.5	16.5	—1.0
	Th	4	5:17	11:28	17:32	23:49
			15.9	—0.2	16.1	—0.6
	F	5	5:57	12:08	18:10	. . .
			15.3	0.6	15.4	. . .
	S	6	0:31	6:36	12:48	18:48
			0.2	14.5	1.6	14.4
	S	7	1:12	7:16	13:30	19:28
			1.2	13.5	2.8	13.2
S	M	8	1:54	7:59	14:16	20:10
			2.4	12.4	4.0	12.1
☾	Tu	9	2:43	8:48	15:12	21:03
A			3.5	11.4	4.9	11.0
	W	10	3:41	9:52	16:20	22:13
			4.4	10.7	5.5	10.4
	Th	11	4:52	11:10	17:33	23:38
			4.8	10.5	5.4	10.3
	F	12	5:58	12:20	18:40	. . .
			4.7	10.9	4.9	. . .
	S	13	0:47	6:56	13:14	19:30
			10.9	4.1	11.7	3.9
	S	14	1:38	7:44	13:55	20:11
			11.7	3.2	12.7	2.8
E	M	15	2:19	8:25	14:33	20:50
			12.8	2.3	13.7	1.6
	Tu	16	2:55	9:05	15:08	21:28
			13.8	1.4	14.8	0.5
●	W	17	3:31	9:42	15:45	22:05
			14.8	0.7	15.6	—0.3
	Th	18	4:07	10:20	16:21	22:43
			15.5	0.2	16.2	—0.8
	F	19	4:45	10:59	16:58	23:22
			15.9	0.0	16.4	—0.9
	S	20	5:25	11:38	17:38	. . .
			16.0	0.2	16.1	. . .
	S	21	0:04	6:06	12:21	18:21
			—0.6	15.7	0.7	15.6
N	M	22	0:48	6:51	13:08	19:08
P			0.0	15.1	1.5	14.7
	Tu	23	1:37	7:42	14:00	20:00
			0.9	14.3	2.4	13.7
☽	W	24	2:33	8:40	15:05	21:05
			1.9	13.4	3.1	12.8
	Th	25	3:38	9:52	16:20	22:24
			2.6	12.8	3.5	12.2
	F	26	4:58	11:12	17:38	23:47
			2.9	12.7	3.3	12.3
	S	27	6:06	12:24	18:46	. . .
			2.7	13.2	2.6	. . .
E	S	28	1:00	7:11	13:27	19:45
			13.0	2.1	13.9	1.6
	M	29	2:00	8:06	14:20	20:36
			13.8	1.4	14.7	0.7
	Tu	30	2:50	8:56	15:06	21:21
			14.6	0.8	15.4	0.0
MAY.						
○	W	1	3:35	9:40	15:47	22:04
			15.0	0.5	15.7	—0.4
	Th	2	4:17	10:23	16:27	22:45
			15.2	0.5	15.6	—0.4
	F	3	4:55	11:05	17:05	23:25
			15.0	0.9	15.3	0.0
	S	4	5:34	11:45	17:43	. . .
			14.6	1.5	14.6	. . .
S	S	5	0:06	6:12	12:25	18:21
			0.6	14.0	2.3	13.8
	M	6	0:46	6:51	13:06	19:00
			1.5	13.3	3.1	12.9
A	Tu	7	1:28	7:33	13:52	19:41
			2.4	12.5	4.0	12.0
	W	8	2:13	8:20	14:42	20:30
			3.4	11.8	4.6	11.3
☾	Th	9	3:05	9:12	15:40	21:27
			4.1	11.4	5.0	10.7
	F	10	4:04	10:13	16:43	22:38
			4.5	11.2	4.9	10.6
	S	11	5:05	11:16	17:45	23:46
			4.5	11.5	4.4	11.0
E	S	12	6:02	12:12	18:37	. . .
			4.1	12.0	3.6	. . .
	M	13	0:43	6:58	13:00	19:23
			11.8	3.4	12.9	2.5
	Tu	14	1:30	7:40	13:46	20:09
			12.7	2.6	13.8	1.5
	W	15	2:16	8:25	14:28	20:52
			13.7	1.7	14.8	0.4
●	Th	16	2:57	9:08	15:13	21:35
			14.6	1.0	15.6	—0.4
	F	17	3:40	9:52	15:53	22:17
			15.3	0.5	16.0	—0.8
	S	18	4:22	10:35	16:36	23:00
			15.8	0.3	16.2	—1.0
N	S	19	5:07	11:20	17:20	23:47
P			16.0	0.4	16.0	—0.8
	M	20	5:52	12:09	18:07	. . .
			15.8	0.7	15.5	. . .
	Tu	21	0:35	6:42	13:00	18:57
			—0.2	15.3	1.3	14.7
	W	22	1:27	7:35	13:55	19:53
			0.6	14.6	1.9	13.8
☽	Th	23	2:22	8:34	14:58	21:00
			1.4	14.0	2.5	13.1
	F	24	3:25	9:40	16:07	22:12
			2.1	13.4	2.8	12.6
E	S	25	4:33	10:50	17:15	23:27
			2.6	13.3	2.7	12.5
	S	26	5:40	11:58	18:20	. . .
			2.6	13.4	2.4	. . .
	M	27	0:37	6:43	12:57	19:18
			12.8	2.5	13.7	1.8
	Tu	28	1:37	7:40	13:52	20:10
			13.2	2.1	14.2	1.2
	W	29	2:28	8:30	14:40	20:57
			13.7	1.8	14.5	0.7
○	Th	30	3:16	9:18	15:24	21:41
			14.0	1.7	14.7	0.5
	F	31	3:58	10:02	16:05	22:25
			14.2	1.7	14.7	0.4
JUNE.						
S	S	1	4:37	10:43	16:44	23:04
			14.1	1.9	14.4	0.7
	S	2	5:15	11:25	17:22	23:45
			14.0	2.2	13.9	1.1
	M	3	5:55	12:05	17:59	. . .
			13.6	2.7	13.4	. . .
A	Tu	4	0:24	6:30	12:45	18:37
			1.6	13.3	3.1	12.8
	W	5	1:08	7:10	13:27	19:15
			2.3	12.9	3.5	12.3
	Th	6	1:47	7:50	14:13	19:58
			2.9	12.6	3.9	11.8
☾	F	7	2:30	8:35	15:02	20:47
			3.5	12.3	4.1	11.5
	S	8	3:18	9:25	15:55	21:42
			3.8	12.2	4.0	11.4
E	S	9	4:11	10:18	16:50	22:43
			4.0	12.2	3.8	11.5
	M	10	5:07	11:12	17:45	23:45
			3.9	12.5	3.2	11.9
	Tu	11	6:02	12:08	18:38	. . .
			3.5	13.0	2.4	. . .
	W	12	0:42	6:56	13:02	19:30
			12.6	3.0	13.8	1.5
	Th	13	1:36	7:48	13:53	20:20
			13.4	2.2	14.5	0.6
	F	14	2:27	8:38	14:43	21:08
			14.3	1.5	15.2	—0.2
●	S	15	3:17	9:28	15:32	21:55
N			15.0	0.9	15.7	—0.7
P	S	16	4:05	10:17	16:18	22:43
			15.6	0.5	16.0	—1.0
	M	17	4:53	11:08	17:08	23:32
			16.0	0.3	15.9	—0.9
	Tu	18	5:42	11:58	17:57	. . .
			16.0	0.4	15.6	. . .
	W	19	0:22	6:32	12:50	18:49
			—0.5	15.7	0.7	15.0
	Th	20	1:13	7:25	13:45	19:45
			0.1	15.3	1.1	14.3
☽	F	21	2:07	8:20	14:42	20:43
E			0.8	14.7	1.6	13.6
	S	22	3:06	9:18	15:43	21:48
			1.6	14.1	2.1	13.0
	S	23	4:07	10:20	16:47	22:58
			2.3	13.6	2.3	12.5
	M	24	5:10	11:28	17:50	. . .
			2.8	13.2	2.5	. . .
	Tu	25	0:07	6:13	12:25	18:50
			12.3	3.1	13.2	2.3
	W	26	1:12	7:13	13:24	19:45
			12.4	3.1	13.3	2.0
	Th	27	2:10	8:09	14:18	20:35
			12.7	3.0	13.5	1.7
S	F	28	2:58	8:59	15:05	21:21
			13.0	2.7	13.7	1.3
○	S	29	3:43	9:46	15:48	22:05
			13.3	2.6	13.8	1.2
	S	30	4:22	10:28	16:27	22:45
			13.5	2.5	13.8	1.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	4:58	11:06	17:05	23:24
			13.6	2.5	13.6	1.3
	Tu	2	5:35	11:40	17:40	. . .
			13.7	2.6	13.4	. . .
	W	3	0:01	6:08	12:22	18:16
			1.5	13.6	2.7	13.2
	Th	4	0:40	6:43	13:00	18:50
			1.8	13.6	2.7	13.0
	F	5	1:17	7:18	13:40	19:28
			2.2	13.5	2.8	12.7
E	S	6	1:56	7:58	14:23	20:10
			2.7	13.3	3.0	12.5
☾	S	7	2:35	8:40	15:10	20:58
			3.1	13.2	3.0	12.2
	M	8	3:22	9:26	16:00	21:51
			3.4	13.0	3.1	12.1
	Tu	9	4:14	10:20	16:56	22:58
			3.6	13.0	2.9	12.2
	W	10	5:13	11:21	17:56	23:58
			3.6	13.1	2.5	12.5
	Th	11	6:17	12:22	18:55	. . .
			3.3	13.5	1.8	. . .
	F	12	1:02	7:18	13:28	19:52
			13.0	2.7	14.0	1.0
N	S	13	2:04	8:17	14:22	20:47
			13.8	1.9	14.7	0.2
● P	S	14	2:59	9:12	15:15	21:38
			14.7	1.1	15.4	—0.5
	M	15	3:50	10:05	16:07	22:30
			15.5	0.5	15.8	—1.0
	Tu	16	4:40	10:55	16:57	23:18
			16.1	0.0	16.0	—1.2
	W	17	5:28	11:45	17:47	. . .
			16.4	—0.2	16.0	. . .
	Th	18	0:07	6:17	12:35	18:38
			—1.0	16.4	—0.1	15.6
E	F	19	0:57	7:06	13:25	19:27
			—0.5	16.0	0.3	15.1
	S	20	1:47	7:55	14:18	20:20
			0.4	15.3	0.9	14.0
☽	S	21	2:38	8:49	15:15	21:17
			1.4	14.5	1.6	13.1
	M	22	3:35	9:46	16:13	22:23
			2.4	13.6	2.4	12.2
	Tu	23	4:36	10:48	17:15	23:35
			3.3	12.8	2.9	11.7
	W	24	5:42	11:55	18:20	. . .
			3.8	12.4	3.1	. . .
	Th	25	0:50	6:50	13:00	19:22
			11.6	4.0	12.4	2.9
S	F	26	1:55	7:52	14:00	20:16
			11.8	3.8	12.6	3.3
	S	27	2:47	8:45	14:50	21:03
			12.3	3.5	13.0	2.1
☽ A	S	28	3:30	9:30	15:38	21:46
			12.8	3.1	13.3	1.7
	M	29	4:05	10:10	16:11	22:25
			13.3	2.6	13.5	1.4
	Tu	30	4:38	10:47	16:45	23:00
			13.7	2.3	13.7	1.2
	W	31	5:08	11:20	17:18	23:35
			14.0	2.0	13.8	1.2

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	5:40	11:55	17:50	. . .
			14.3	1.8	13.8	. . .
E	F	2	0:10	6:12	12:28	18:28
			1.3	14.5	1.6	13.8
	S	3	0:43	6:44	13:06	18:57
			1.6	14.5	1.7	13.7
	S	4	1:17	7:20	13:44	19:35
			2.0	14.3	1.9	13.4
☾	M	5	1:56	7:59	14:28	20:18
			2.4	14.0	2.3	13.1
	Tu	6	2:38	8:48	15:18	21:10
			3.0	13.6	2.6	12.7
	W	7	3:31	9:37	16:17	22:12
			3.5	13.2	2.8	12.3
	Th	8	4:34	10:42	17:22	23:25
			3.7	12.9	2.7	12.3
N	F	9	5:47	11:58	18:28	. . .
			3.6	13.0	2.3	. . .
	S	10	0:38	6:57	13:04	19:33
			12.7	3.0	13.5	1.5
	S	11	1:46	8:01	14:07	20:31
			13.5	2.1	14.3	0.5
P ●	M	12	2:45	8:57	15:05	21:25
			14.7	1.1	15.2	—0.4
	Tu	13	3:37	9:50	15:56	22:14
			15.7	0.2	15.9	—1.1
	W	14	4:25	10:40	16:45	23:02
			16.5	—0.5	16.4	—1.4
E	Th	15	5:10	11:27	17:32	23:48
			16.9	—0.9	16.4	—1.3
	F	16	5:55	12:14	18:00	. . .
			16.9	—0.8	16.1	. . .
	S	17	0:34	6:40	13:00	19:04
			—0.7	16.4	—0.3	15.3
	S	18	1:20	7:28	13:50	19:52
			0.3	15.5	0.5	14.2
☽	M	19	2:10	8:18	14:40	20:44
			1.5	14.4	1.5	13.0
	Tu	20	3:02	9:08	15:38	21:45
			2.8	13.2	2.7	11.9
	W	21	4:04	10:10	16:42	23:02
			3.9	12.1	3.5	11.1
S	Th	22	5:14	11:25	17:52	. . .
			4.6	11.5	3.8	. . .
	F	23	0:27	6:30	12:40	19:00
			10.9	4.8	11.5	3.7
	S	24	1:38	7:35	13:45	19:57
			11.3	4.5	11.9	3.2
A	S	25	2:30	8:27	14:35	20:42
			12.0	3.8	12.4	2.6
	M	26	3:07	9:10	15:20	21:23
			12.7	3.1	13.0	2.0
○	Tu	27	3:40	9:45	15:50	21:58
			13.4	2.4	13.5	1.4
	W	28	4:10	10:18	16:20	22:32
			14.1	1.7	14.0	1.0
E	Th	29	4:38	10:51	16:51	23:05
			14.6	1.2	14.4	0.8
	F	30	5:07	11:24	17:22	23:37
			15.1	0.8	14.6	0.8
	S	31	5:37	11:58	18:53	. . .
			15.3	0.7	14.7	. . .

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	0:10	6:10	12:32	18:27
			1.0	15.3	0.8	14.6
	M	2	0:44	6:45	13:10	19:05
			1.4	15.0	1.1	14.2
	Tu	3	1:22	7:25	13:53	19:48
			2.0	14.5	1.6	13.7
☾	W	4	2:05	8:08	14:43	20:40
			2.7	13.8	2.2	13.0
N	Th	5	3:00	9:04	15:45	21:43
			3.4	13.1	2.8	12.4
	F	6	4:08	10:13	16:55	23:02
			3.9	12.5	3.0	12.1
	S	7	5:29	11:34	18:08	. . .
			3.8	12.4	2.7	. . .
	S	8	0:28	6:45	12:52	19:18
			12.6	3.2	13.0	1.8
P	M	9	1:33	7:50	13:58	20:17
			13.6	2.1	14.0	0.8
●	Tu	10	2:30	8:45	14:54	21:18
			14.8	0.8	15.1	—0.2
E	W	11	3:20	9:35	15:48	21:56
			16.0	—0.3	16.0	—1.0
	Th	12	4:07	10:22	16:30	22:42
			16.8	—1.0	16.5	—1.3
	F	13	4:50	11:05	17:12	23:25
			17.1	—1.3	16.6	—1.1
	S	14	5:32	11:50	17:54	. . .
			17.0	—1.2	16.1	. . .
	S	15	0:08	6:13	12:33	18:38
			—0.4	16.3	—0.5	15.8
	M	16	0:52	6:55	13:18	19:21
			0.4	15.3	0.5	14.1
	Tu	17	1:40	7:40	14:06	20:11
			1.9	14.0	1.8	12.9
☽ S	W	18	2:30	8:30	15:02	21:10
			3.3	12.7	3.0	11.7
	Th	19	3:30	9:32	16:07	22:25
			4.4	11.5	4.0	10.8
	F	20	4:40	10:50	17:20	23:55
			5.1	10.8	4.4	10.6
A	S	21	6:05	12:17	18:31	. . .
			5.2	10.8	4.3	. . .
	S	22	1:07	7:12	13:25	19:28
			11.1	4.7	11.4	3.8
	M	23	1:57	8:00	14:13	20:15
			11.8	4.0	12.1	3.0
	Tu	24	2:34	8:40	14:50	20:52
			12.7	3.0	12.8	2.2
	W	25	3:05	9:13	15:20	21:26
			13.5	2.0	13.5	1.5
E ○	Th	26	3:33	9:45	15:50	21:58
			14.3	1.2	14.3	1.0
	F	27	4:02	10:20	16:21	22:32
			15.0	0.5	14.9	0.6
	S	28	4:33	10:52	16:53	23:05
			15.5	0.0	15.2	0.5
	S	29	5:06	11:27	17:26	23:40
			15.8	—0.1	15.3	0.6
	M	30	5:40	12:02	18:01	. . .
			15.8	0.0	15.2	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	0:15	6:17	12:42	18:41
			1.0	15.4	0.5	14.8
	W	2	0:56	6:57	13:27	19:27
			1.7	14.8	1.2	14.1
N	Th	3	1:42	7:44	14:18	20:20
☾			2.5	13.9	2.1	13.3
	F	4	2:40	8:42	15:22	21:27
			3.3	13.0	2.8	12.5
	S	5	3:55	9:56	16:35	22:48
			3.9	12.2	3.2	12.3
	S	6	5:16	11:22	17:52	. . .
			3.8	12.2	2.9	. . .
P	M	7	0:10	6:32	12:42	19:00
			12.7	3.0	12.8	2.1
	Tu	8	1:16	7:35	13:46	19:58
			13.8	1.8	13.9	1.0
E	W	9	2:12	8:28	14:39	20:48
			14.9	0.6	15.0	0.2
●	Th	10	3:00	9:15	15:26	21:34
			15.8	—0.4	15.8	—0.5
	F	11	3:45	10:00	16:10	22:20
			16.5	—1.1	16.2	—0.7
	S	12	4:35	10:43	16:51	23:02
			16.7	—1.3	16.2	—0.5
	S	13	5:06	11:25	17:33	23:43
			16.5	—1.0	15.7	0.2
	M	14	5:47	12:08	18:13	. . .
			15.8	—0.3	14.9	. . .
	Tu	15	0:26	6:27	12:50	18:57
			1.3	14.8	0.7	13.9
S	W	16	1:12	7:10	13:37	19:42
			2.4	13.5	2.0	12.8
☽	Th	17	2:00	7:57	14:28	20:36
			3.5	12.3	3.2	11.7
	F	18	2:59	8:52	15:28	21:43
			4.7	11.2	4.2	10.9
A	S	19	4:10	10:10	16:40	23:04
			5.3	10.4	4.7	10.6
	S	20	5:26	11:36	17:48	. . .
			5.3	10.4	4.6	. . .
	M	21	0:16	6:30	12:45	18:46
			11.0	4.8	10.9	4.1
	Tu	22	1:07	7:20	13:38	19:32
			11.8	4.0	11.7	3.4
E	W	23	1:47	7:59	14:10	20:12
			12.6	3.0	12.5	2.6
	Th	24	2:20	8:35	14:43	20:48
			13.5	1.9	13.5	1.8
○	F	25	2:58	9:10	15:16	21:23
			14.4	0.9	14.3	1.1
	S	26	3:26	9:46	15:50	22:00
			15.2	0.1	15.0	0.7
	S	27	4:00	10:22	16:27	22:37
			15.7	—0.4	15.5	0.5
	M	28	4:37	11:00	17:02	23:15
			16.0	—0.6	15.7	0.5
	Tu	29	5:14	11:40	17:42	23:56
			15.9	—0.5	15.6	0.9
N	W	30	5:55	12:23	18:25	. . .
			15.5	0.1	15.1	. . .
	Th	31	0:40	6:38	13:10	19:13
			1.5	14.9	0.9	14.4
NOVEMBER.						
☾	F	1	1:31	7:29	14:02	20:10
			2.3	13.9	1.7	13.6
	S	2	2:32	8:30	15:05	21:15
			3.0	13.0	2.5	13.0
P	S	3	3:45	9:45	16:16	22:32
			3.5	12.3	3.0	12.7
	M	4	5:01	11:09	17:32	23:48
			3.3	12.2	2.8	13.1
E	Tu	5	6:12	12:25	18:38	. . .
			2.7	12.8	2.3	. . .
	W	6	0:58	7:13	13:28	19:37
			13.8	1.8	13.6	1.5
	Th	7	1:49	8:07	14:21	20:27
			14.6	0.7	14.5	0.8
●	F	8	2:37	8:58	15:08	21:13
			15.4	—0.1	15.1	0.4
	S	9	3:21	9:38	15:52	21:58
			15.9	—0.6	15.4	0.3
	S	10	4:08	10:22	16:33	22:42
			16.0	—0.8	15.4	0.5
	M	11	4:44	11:04	17:13	23:23
			15.7	—0.5	15.1	1.0
S	Tu	12	5:24	11:46	17:54	. . .
			15.1	0.1	14.5	. . .
	W	13	0:06	6:03	12:27	18:35
			1.8	14.2	1.0	13.7
	Th	14	0:50	6:45	13:11	19:18
			2.7	13.2	2.0	12.9
	F	15	1:37	7:28	13:58	20:07
			3.6	12.2	3.0	12.1
A	S	16	2:28	8:18	14:51	21:00
☽			4.3	11.4	3.9	11.5
	S	17	3:29	9:20	15:50	22:03
			4.8	10.7	4.4	11.2
	M	18	4:33	10:30	16:52	23:05
			5.0	10.5	4.6	11.3
E	Tu	19	5:32	11:38	17:50	. . .
			4.6	10.7	4.4	. . .
	W	20	0:01	6:27	12:35	18:40
			11.7	3.9	11.3	3.8
	Th	21	0:50	7:12	13:21	19:27
			12.4	3.0	12.1	3.1
	F	22	1:32	7:55	14:02	20:09
			13.3	2.0	13.1	2.4
	S	23	2:13	8:35	14:42	20:50
			14.2	1.0	14.0	1.6
○	S	24	2:53	9:16	15:22	21:32
			15.0	0.1	14.8	1.0
	M	25	3:33	9:57	16:03	22:13
			15.6	—0.5	15.4	0.6
N	Tu	26	4:15	10:39	16:43	22:58
			15.9	—0.8	15.8	0.5
	W	27	4:57	11:22	17:28	23:43
			15.9	—0.8	15.8	0.7
P	Th	28	5:42	12:06	18:15	. . .
			15.6	—0.3	15.5	. . .
	F	29	0:32	6:28	12:58	19:05
			1.1	15.0	0.3	15.0
	S	30	1:24	7:21	13:50	20:00
			1.7	14.2	1.2	14.3
DECEMBER.						
☾	S	1	2:23	8:20	14:49	21:02
			2.2	13.4	2.0	13.7
E	M	2	3:50	9:28	15:55	22:10
			2.6	12.7	2.5	13.3
	Tu	3	4:38	10:45	17:04	23:18
			2.7	12.4	2.8	13.3
	W	4	5:45	12:00	18:10	. . .
			2.5	12.5	2.7	. . .
	Th	5	0:25	6:48	13:07	19:12
			13.5	2.0	13.0	2.3
	F	6	1:23	7:43	14:03	20:06
			14.0	1.4	13.5	2.0
	S	7	2:15	8:33	14:53	20:55
			14.5	0.7	14.0	1.6
●	S	8	3:03	9:29	15:38	21:42
			14.8	0.3	14.3	1.5
S	M	9	3:47	10:05	16:21	22:27
			15.0	0.1	14.5	1.5
	Tu	10	4:28	10:47	17:00	23:08
			14.8	0.2	14.4	1.8
	W	11	5:08	11:28	17:40	23:50
			14.4	0.5	14.1	2.2
	Th	12	5:47	12:09	18:18	. . .
			13.9	1.1	13.7	. . .
	F	13	0:31	6:26	12:50	18:57
			2.6	13.2	1.8	13.3
A	S	14	1:14	7:05	13:30	19:37
			3.1	12.6	2.6	12.8
	S	15	1:58	7:45	14:14	20:20
			3.6	12.0	3.3	12.4
☽	M	16	2:45	8:30	15:00	21:05
			4.0	11.5	3.9	12.1
E	Tu	17	3:38	9:22	15:51	21:57
			4.1	11.1	4.2	11.9
	W	18	4:31	10:20	16:45	22:50
			4.1	11.0	4.4	12.0
	Th	19	5:26	11:22	17:42	23:47
			3.8	11.2	4.1	12.4
	F	20	6:20	12:23	18:37	. . .
			3.1	11.8	3.7	. . .
	S	21	0:42	7:13	13:20	19:30
			13.0	2.3	12.6	2.9
	S	22	1:35	8:02	14:10	20:20
			13.8	1.4	13.5	2.2
N	M	23	2:25	8:50	15:00	21:10
○			14.6	0.4	14.4	1.4
	Tu	24	3:12	9:36	15:45	21:57
			15.3	—0.3	15.2	0.8
P	W	25	3:58	10:22	16:31	22:45
			15.7	—0.8	15.8	0.4
	Th	26	4:45	11:10	17:18	23:33
			16.0	—1.0	16.1	0.2
	F	27	5:33	11:57	18:05	. . .
			15.9	—0.9	16.1	. . .
	S	28	0:22	6:22	12:45	18:54
			0.3	15.5	—0.4	15.8
	S	29	1:14	7:12	13:36	19:45
			0.7	14.9	0.4	15.2
E	M	30	2:07	8:07	14:30	20:40
☾			1.2	14.1	1.3	14.6
	Tu	31	3:06	9:06	15:28	21:40
			1.7	13.3	2.1	13.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Eastern Standard, 75th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.								FEBRUARY.								MARCH.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	6:47	13:47	19:18	. . .		P	Th	1	1:13	8:04	15:22	21:04		P	F	1	1:06	7:47	14:58	20:46	
			6.0	0.8	3.5	. . .					1.1	7.5	—0.7	3.4					1.0	7.6	—0.9	3.8	
	Tu	2	0:41	7:32	14:38	20:15		○	F	2	2:00	8:46	16:00	21:47			S	2	1:52	8:25	15:30	21:22	
			1.0	6.6	0.2	3.4					0.9	7.8	—1.0	3.5					0.8	7.8	—1.0	4.0	
N	W	3	1:25	8:15	15:26	21:09			S	3	2:43	9:27	16:38	22:29		○	S	3	2:30	9:06	16:05	21:53	
			1.0	7.1	—0.2	3.4					0.9	—2.1	—1.0	3.6					0.7	7.7	—0.9	4.2	
☿P	Th	4	2:08	8:55	16:12	21:55			S	4	3:25	10:07	17:15	23:10		E	M	4	3:14	9:45	16:39	22:35	
			1.0	7.5	—0.6	3.4					1.0	7.7	—0.9	3.7					0.7	7.3	—0.6	4.2	
	F	5	2:50	9:40	16:58	22:48			M	5	4:08	10:45	17:54	23:55			Tu	5	3:54	10:21	17:12	23:12	
☽			1.1	7.6	—0.7	3.4					1.2	7.2	—0.6	3.7					0.9	6.7	—0.2	4.2	
	S	6	3:34	10:25	17:45	23:40		E	Tu	6	4:56	11:25	18:35	. . .			W	6	4:36	11:00	17:44	23:52	
			1.2	7.5	—0.7	3.3					1.5	6.5	—0.1	. . .					1.2	5.9	0.4	4.2	
	S	7	4:18	11:09	18:32	. . .			W	7	0:42	5:40	12:06	19:15			Th	7	5:23	11:37	18:15	. . .	
			1.5	7.2	—0.6	. . .					3.7	1.9	5.7	0.4					1.7	5.0	0.9	. . .	
	M	8	0:34	5:07	11:55	19:19			Th	8	1:37	6:43	12:55	20:00			F	8	0:41	6:22	12:17	18:45	
			3.3	1.8	6.7	—0.3					3.8	2.8	4.8	0.9					4.2	2.2	4.0	1.4	
E	Tu	9	1:33	6:00	12:44	20:10		☾	F	9	2:45	8:22	13:51	20:50			S	9	1:42	8:18	13:13	19:13	
			3.4	2.1	6.0	0.1					4.0	2.7	3.8	1.4					4.2	2.5	3.1	1.9	
☾	W	10	2:35	7:16	13:40	21:02			S	10	4:00	11:14	15:25	21:48		☾	S	10	3:08	12:08	15:33	19:50	
			3.6	2.4	5.3	0.4					4.3	2.5	3.0	1.7					4.3	2.1	2.4	2.3	
	Th	11	3:42	8:51	14:40	21:56			S	11	5:10	13:00	17:34	22:45		S	M	11	4:29	13:05	19:29	21:50	
			3.8	2.6	4.6	0.8					4.7	1.8	2.7	1.9					4.7	1.4	2.5	2.4	
	F	12	4:45	10:45	15:58	22:45			M	12	6:00	13:50	18:10	23:35		A	Tu	12	5:30	13:37	19:47	23:06	
			4.2	2.5	3.9	1.0					5.3	1.1	2.7	2.0					5.2	0.8	2.6	2.4	
	S	13	5:38	12:20	17:20	23:31		S	Tu	13	6:43	14:25	20:00	. . .			W	13	6:12	14:08	18:54	23:55	
			4.7	2.0	3.5	1.3					5.8	0.6	2.7	. . .					5.8	0.4	2.7	2.1	
	S	14	6:23	13:29	18:38	. . .		A	W	14	0:15	7:15	14:55	20:30			Th	14	6:47	14:25	20:02	. . .	
			5.2	1.4	3.2	. . .					1.9	6.3	0.2	2.7					6.2	0.2	2.9	. . .	
	M	15	0:09	7:00	14:20	19:41			Th	15	0:47	7:46	15:20	20:50			F	15	0:30	7:19	14:42	20:16	
			1.5	5.7	0.9	3.0					1.7	6.8	0.0	2.8					1.8	6.6	0.1	3.1	
	Tu	16	0:42	7:35	15:00	20:30			F	16	1:20	8:15	15:42	21:14			S	16	1:04	7:50	15:00	20:35	
			1.5	6.2	0.4	2.9					1.5	7.0	—0.1	2.9					1.4	6.8	0.1	3.4	
S	W	17	1:11	8:07	15:37	21:10		●	S	17	1:50	8:45	16:02	21:37			S	17	1:37	8:20	15:17	20:55	
A			1.6	6.6	0.1	2.8					1.3	7.2	—0.1	3.1					1.1	6.9	0.1	3.7	
	Th	18	1:37	8:40	16:10	21:40			S	18	2:12	9:17	16:24	22:00		●	M	18	2:11	8:52	15:36	21:21	
			1.6	6.9	0.0	2.7					1.1	7.2	0.0	3.3					0.8	6.8	0.1	4.1	
●	F	19	2:03	9:10	16:38	22:10			M	19	2:56	9:47	16:46	22:28		E	Tu	19	2:45	9:22	15:57	21:50	
			1.5	7.1	—0.1	2.7					1.0	7.0	0.1	3.6					0.7	6.5	0.3	4.4	
	S	20	2:30	9:42	17:07	22:39		E	Tu	20	3:33	10:17	17:10	23:00			W	20	3:29	9:55	16:20	22:24	
			1.4	7.1	0.0	2.7					1.0	6.6	0.3	3.8					0.6	6.0	0.4	4.7	
	S	21	3:02	10:10	17:33	23:11			W	21	4:12	10:50	17:35	23:33			Th	21	4:09	10:28	16:46	23:02	
			1.3	7.0	0.1	2.8					1.1	6.0	0.5	4.0					0.8	5.4	0.6	4.9	
	M	22	3:33	10:45	18:00	23:44			Th	22	5:00	11:24	18:08	. . .			F	22	5:00	11:05	17:14	23:50	
			1.4	6.7	0.3	3.0					1.4	5.3	0.7	. . .					1.2	4.6	0.9	5.0	
	Tu	23	4:16	11:17	18:30	. . .			F	23	0:25	5:57	12:00	18:35			S	23	6:04	11:51	17:45	. . .	
			1.5	6.2	0.5	. . .					4.2	1.8	4.5	1.0					1.6	3.8	1.2	. . .	
	W	24	0:36	5:04	11:58	18:02			S	24	1:27	7:26	13:00	19:18			S	24	0:53	7:46	13:05	18:30	
			3.2	1.7	5.6	0.8					4.4	2.3	3.6	1.3					5.0	1.9	3.0	1.6	
E	Th	25	1:16	6:01	12:36	19:40			S	25	2:47	10:05	14:50	20:24		N	M	25	2:15	10:16	15:16	19:51	
			3.5	2.1	4.9	1.0					4.7	2.2	2.9	1.6		☽			5.1	1.7	2.6	1.9	
	F	26	2:20	7:31	13:31	20:24		☽	M	26	4:12	12:11	16:58	21:56			Tu	26	3:45	11:47	17:20	21:48	
			3.8	2.4	4.2	1.2					5.2	1.6	2.6	1.7					5.5	1.0	2.7	2.0	
☽	S	27	3:30	9:47	15:00	21:20			Tu	27	5:23	13:06	18:29	23:18			W	27	5:56	12:37	18:24	23:12	
			4.3	2.5	3.4	1.3					5.9	0.7	2.8	1.6					6.0	0.3	3.1	1.7	
	S	28	4:41	11:58	16:44	22:25		N	W	28	6:18	13:46	19:25	. . .		P	Th	28	5:54	13:15	19:06	. . .	
			4.9	2.0	3.0	1.4					6.6	0.0	3.1	. . .					6.5	—0.2	3.5	. . .	
	M	29	5:40	13:06	18:18	23:30			Th	29	0:15	7:05	14:23	20:07			F	29	0:10	6:30	13:50	19:42	
			5.6	1.2	2.9	1.3					1.3	7.2	—0.5	3.5					1.4	7.0	—0.5	4.0	
	Tu	30	6:35	13:57	19:25	. . .											S	30	1:00	7:26	14:24	20:18	
			6.4	0.4	3.1	. . .													1.0	7.2	—0.7	4.3	
N	W	31	0:24	7:20	14:41	20:19											S	31	1:42	8:07	14:57	20:51	
			1.2	7.0	—0.2	3.2													0.7	7.2	—0.7	4.6	

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.9 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽ 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ☾	M	1	2:24 0.5	8:46 6.9	15:27 −0.4	21:24 4.8
	Tu	2	3:08 0.5	9:24 6.5	15:57 −0.1	22:00 4.9
	W	3	3:46 0.7	10:00 5.8	16:25 0.4	22:33 4.9
	Th	4	4:30 1.0	10:37 5.0	16:52 0.9	23:11 4.8
	F	5	5:21 1.4	11:16 4.1	17:11 1.4	23:51 4.7
	S	6	6:29 1.9	12:00 3.2	17:23 1.8	. . . . .
8	S	7	0:44 4.6	8:43 2.1	13:16 2.4	17:05 2.1
	M	8	1:57 4.6	11:40 1.6	. . . . .	. . . . .
☾ A	Tu	9	3:23 4.8	12:28 1.1	. . . . .	. . . . .
	W	10	4:35 5.1	12:58 0.8	19:44 2.8	22:26 2.6
	Th	11	5:27 5.5	13:17 0.6	19:17 2.9	23:24 2.3
	F	12	6:07 5.8	13:34 0.5	19:20 3.2	. . . . .
	S	13	0:07 1.8	6:43 6.0	13:50 0.4	19:32 3.6
	S	14	0:47 1.4	7:18 6.1	14:06 0.4	19:54 4.0
E	M	15	1:28 1.0	7:50 6.1	14:25 0.4	20:20 4.5
	Tu	16	2:02 0.7	8:25 5.9	14:48 0.4	20:48 5.0
●	W	17	2:45 0.5	9:00 5.6	15:11 0.5	21:20 5.4
	Th	18	3:28 0.5	9:37 5.1	15:36 0.6	21:56 5.6
	F	19	4:17 0.6	10:18 4.5	16:04 0.8	22:38 5.7
	S	20	5:16 0.9	11:05 3.8	16:35 1.1	23:29 5.7
N	S	21	6:26 1.1	12:07 3.2	17:12 1.5	. . . . .
P	M	22	0:30 5.6	8:04 1.2	13:43 2.7	18:04 1.9
	Tu	23	1:47 5.6	9:49 1.0	15:40 2.7	19:42 2.2
☽	W	24	3:08 5.7	11:02 0.5	17:07 3.1	21:35 2.2
	Th	25	4:21 5.9	11:53 0.1	18:00 3.5	22:56 1.9
	F	26	5:22 6.2	12:35 −0.2	18:39 4.0	23:57 1.5
	S	27	6:14 6.4	13:11 −0.3	19:14 4.5	. . . . .
E	S	28	0:47 1.1	7:00 6.4	13:45 −0.3	19:48 4.9
	M	29	1:38 0.8	7:44 6.2	14:17 −0.1	20:21 5.2
	Tu	30	2:17 0.6	8:26 5.8	14:46 0.2	20:54 5.4

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	3:02 0.5	9:07 5.3	15:14 0.5	21:28 5.5
	Th	2	3:47 0.6	9:46 4.6	15:38 0.9	22:01 5.6
	F	3	4:35 0.8	10:37 3.9	15:58 1.4	22:36 5.5
	S	4	5:31 1.1	11:12 3.2	16:11 1.7	23:15 5.4
S	S	5	6:41 1.3	12:09 2.6	16:09 2.0	. . . . .
	M	6	0:00 5.3	8:24 1.4	13:45 2.2	15:47 2.1
A	Tu	7	0:56 5.1	10:16 1.3	. . . . .	. . . . .
	W	8	2:06 5.0	11:16 1.1	. . . . .	. . . . .
☾	Th	9	3:18 5.0	11:49 0.9	18:54 2.8	21:09 2.8
	F	10	4:21 5.1	12:11 0.9	18:17 3.1	22:46 2.4
	S	11	5:14 5.2	12:29 0.8	18:28 3.6	23:42 2.0
E	S	12	6:00 5.2	12:48 0.8	18:49 4.1	. . . . .
	M	13	0:30 1.5	6:42 5.2	13:10 0.7	19:16 4.7
	Tu	14	1:16 1.0	7:23 5.1	13:33 0.7	19:48 5.3
	W	15	2:01 0.7	8:04 4.8	14:00 0.7	20:22 5.8
●	Th	16	2:47 0.4	8:47 4.5	14:29 0.8	21:00 6.2
	F	17	3:38 0.3	9:31 4.1	15:00 0.9	21:40 6.4
	S	18	4:31 0.3	10:20 3.7	15:34 1.1	22:24 6.5
N P	S	19	5:31 0.4	11:19 3.3	16:12 1.4	23:15 6.4
	M	20	6:39 0.4	12:29 2.9	16:57 1.7	. . . . .
	Tu	21	0:12 6.3	7:54 0.4	13:54 2.8	17:58 2.1
	W	22	1:18 6.0	9:07 0.3	15:22 3.0	19:29 2.3
☽	Th	23	2:29 5.8	10:12 0.2	16:33 3.4	21:12 2.4
	F	24	3:39 5.7	11:04 0.1	17:25 3.9	22:36 2.1
E	S	25	4:44 5.6	11:48 0.0	18:08 4.4	23:48 1.7
	S	26	5:42 5.5	12:28 0.1	18:45 4.9	. . . . .
	M	27	0:41 1.3	6:37 5.3	13:04 0.2	19:21 5.3
	Tu	28	1:33 0.9	7:26 5.0	13:37 0.5	19:56 5.7
	W	29	2:22 0.7	8:12 4.6	14:06 0.8	20:30 6.0
○	Th	30	3:10 0.5	8:58 4.1	14:32 1.1	21:04 6.1
	F	31	3:58 0.4	9:42 3.6	14:55 1.4	21:38 6.2

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	4:48 0.5	10:28 3.1	15:13 1.6	22:13 6.2
	S	2	5:39 0.6	11:16 2.7	15:26 1.8	22:48 6.1
	M	3	6:35 0.7	12:12 2.4	15:35 1.9	23:27 5.9
A	Tu	4	7:34 0.8	13:21 2.2	15:44 2.1	. . . . .
	W	5	0:10 5.7	8:34 1.0	14:43 2.3	16:04 2.2
	Th	6	1:00 5.4	9:26 1.1	16:02 2.5	16:59 2.5
☾	F	7	1:59 5.0	10:07 1.1	16:35 2.9	19:44 2.7
	S	8	3:04 4.7	10:42 1.2	17:04 3.4	21:58 2.6
E	S	9	4:10 4.5	11:11 1.2	17:36 4.0	23:21 2.2
	M	10	5:13 4.3	11:41 1.1	18:11 4.7	. . . . .
	Tu	11	0:25 1.6	6:09 4.2	12:13 1.0	18:48 5.3
	W	12	1:21 1.1	7:02 4.0	12:46 1.0	19:26 6.0
	Th	13	2:12 0.6	7:54 3.8	13:21 0.9	20:05 6.5
●	F	14	3:02 0.3	8:45 3.6	13:59 1.0	20:47 6.9
N	S	15	3:52 0.0	9:36 3.5	14:38 1.0	21:30 7.2
P	S	16	4:43 −0.2	10:29 3.3	15:18 1.2	22:15 7.2
	M	17	5:35 −0.3	11:25 3.2	16:02 1.4	23:00 7.1
	Tu	18	6:29 −0.3	12:36 3.1	16:52 1.7	23:52 6.8
	W	19	7:24 −0.2	13:32 3.2	17:51 2.0	. . . . .
	Th	20	0:47 6.3	8:22 0.0	14:41 3.4	19:05 2.3
☽ E	F	21	1:47 5.8	9:18 0.1	15:48 3.7	20:40 2.5
	S	22	2:52 5.3	10:11 0.3	16:47 4.1	22:15 2.3
	S	23	4:08 4.8	11:00 0.5	17:37 4.6	23:38 2.0
	M	24	5:13 4.4	11:45 0.7	18:21 5.1	. . . . .
	Tu	25	0:48 1.5	6:18 4.1	12:25 0.9	19:01 5.6
	W	26	1:46 1.0	7:18 3.8	12:59 1.1	19:38 6.1
	Th	27	2:38 0.6	8:11 3.5	13:30 1.3	20:13 6.4
S	F	28	3:24 0.3	9:00 3.3	13:58 1.4	20:47 6.7
☾	S	29	4:07 0.1	9:45 3.0	14:22 1.5	21:20 6.8
	S	30	4:48 0.0	10:26 2.8	14:45 1.6	21:53 6.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.9 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon	Day of— W.	Mo.	Time and Height of High and Low Water.				
A	M	1	5:27	11:04	15:06	22:24			Th	1	5:42	11:27	16:00	23:00			S	1	5:32	11:52	17:28	23:34	
			0.1	2.6	1.7	6.7					0.3	3.1	1.5	6.2					0.8	4.3	1.7	4.5	
	Tu	2	6:03	11:41	15:31	22:58		E	F	2	6:05	12:00	16:40	23:30			M	2	5:58	12:46	18:40	. . .	
			0.3	2.5	1.7	6.5					0.6	3.4	1.7	5.6					1.1	4.4	2.2	. . .	
	W	3	6:38	12:20	16:01	23:32			S	3	6:30	12:45	17:30	. . .			Tu	3	0:17	6:30	14:00	21:08	
			0.5	2.5	1.8	6.1					0.8	3.5	2.0	. . .					3.6	1.3	4.6	2.4	
	Th	4	7:13	13:04	16:41	. . .			S	4	0:05	7:00	13:40	18:40		☾	W	4	1:48	7:20	15:32	23:48	
			0.7	2.6	2.0	. . .					4.9	1.1	3.8	2.4					2.8	1.6	5.0	1.8	
	F	5	0:09	7:47	13:43	17:37		☾	M	5	0:48	7:35	14:52	20:48		N	Th	5	4:22	8:55	16:51	. . .	
			5.6	0.9	2.9	2.3					4.2	1.3	4.2	2.6					2.5	1.9	5.6	. . .	
E	S	6	0:58	8:23	14:51	19:03			Tu	6	2:00	8:25	16:07	23:33			F	6	0:45	6:05	10:38	17:51	
			5.1	1.1	3.2	2.6					3.4	1.5	4.7	2.2					1.0	2.7	1.8	6.3	
☾	S	7	1:45	9:02	15:52	21:12			W	7	4:04	9:33	17:15	. . .			S	7	1:25	7:00	11:50	18:40	
			4.5	1.3	3.7	2.7					2.8	1.6	5.4	. . .					0.3	3.0	1.5	6.9	
	M	8	2:59	9:47	16:49	23:14			Th	8	0:55	5:58	10:50	18:12			S	8	2:00	7:44	12:30	19:25	
			3.9	1.3	4.4	2.3					1.5	2.7	1.6	6.1					—0.3	3.4	1.1	7.4	
	Tu	9	4:26	10:35	17:40	. . .		N	F	9	1:43	7:06	11:53	19:00		P	M	9	2:34	8:20	13:30	20:06	
			3.5	1.3	5.1	. . .					0.7	2.9	1.4	6.8					—0.7	3.8	0.8	7.6	
	W	10	0:37	5:48	11:28	18:27			S	10	2:23	7:58	12:48	19:43		●	Tu	10	3:07	8:57	14:13	20:46	
			1.7	3.2	1.3	5.8					0.0	3.1	1.2	7.4					—0.9	4.1	0.6	7.6	
	Th	11	1:36	6:57	12:11	19:12			S	11	3:00	8:42	13:36	20:25		E	W	11	3:40	9:32	14:55	21:35	
			1.0	3.2	1.2	6.5					—0.5	3.4	1.0	7.8					—0.8	4.4	0.6	7.3	
N	F	12	2:26	7:56	12:58	19:54		P ●	M	12	3:36	9:23	14:20	21:05			Th	12	4:12	10:08	15:37	22:04	
			0.4	3.2	1.1	7.1					—0.8	3.6	0.8	7.9					—0.6	4.5	0.7	6.8	
	S	13	3:10	8:49	13:44	20:37			Tu	13	4:13	10:05	15:04	21:45			F	13	4:45	10:46	16:20	22:41	
			—0.1	3.2	1.0	7.5					—1.0	3.8	0.8	7.8					—0.2	4.6	0.9	6.0	
● P	S	14	3:53	9:37	14:27	21:20			W	14	4:48	10:43	15:47	22:25			S	14	5:18	11:27	17:08	23:20	
			—0.5	3.3	1.0	7.7					—0.9	3.9	0.9	7.4					0.3	4.5	1.4	5.1	
	M	15	4:36	10:23	15:11	22:02		E	Th	15	5:25	11:25	16:30	23:05			S	15	5:50	12:13	18:07	. . .	
			—0.8	3.4	1.1	7.7					—0.6	4.0	1.2	6.7					0.8	4.5	1.8	. . .	
	Tu	16	5:19	11:11	15:56	22:45			F	16	6:00	12:10	17:18	23:45			M	16	0:05	6:20	13:10	19:40	
			—0.8	3.4	1.2	7.4					—0.3	4.0	1.6	5.9					4.1	1.4	4.4	2.2	
	W	17	6:01	12:00	16:43	23:29			S	17	6:42	13:00	18:15	. . .		☽	Tu	17	1:06	6:50	14:26	22:53	
			—0.7	3.5	1.5	7.0					0.3	4.0	2.0	. . .					3.2	1.8	4.5	2.1	
	Th	18	6:46	12:53	17:35	. . .			S	18	0:30	7:24	14:04	19:40		S	W	18	3:13	7:36	15:54	. . .	
			—0.4	3.5	1.8	. . .					5.0	0.8	4.1	2.5					2.5	2.3	4.8	. . .	
E	F	19	0:15	7:32	13:51	18:38		☽	M	19	1:27	8:12	15:20	22:15			Th	19	0:25	7:00	9:31	17:05	
			6.3	0.0	3.7	2.2					4.0	1.4	4.3	2.5					1.4	2.6	2.5	5.2	
☽	S	20	1:05	8:22	14:57	20:06			Tu	20	2:58	9:10	16:38	. . .			F	20	1:10	7:30	10:56	17:54	
			5.5	0.4	3.9	2.5					3.1	1.7	4.8	. . .					0.8	2.8	2.4	5.7	
	S	21	2:06	9:15	16:06	22:01			W	21	0:26	5:12	10:20	17:40		A	S	21	1:40	7:44	11:47	18:33	
			4.7	0.7	4.3	2.5					1.8	2.7	2.0	5.3					0.4	2.9	2.2	6.1	
	M	22	3:22	10:09	17:09	23:55		S	Th	22	1:26	6:58	11:20	18:25			S	22	2:06	7:55	12:24	19:06	
			4.0	1.1	4.7	2.1					1.1	2.7	2.0	5.8					0.2	3.0	1.9	6.4	
	Tu	23	4:52	11:03	18:01	. . .			F	23	2:05	7:50	12:05	19:08			M	23	2:27	8:06	12:57	19:37	
			3.4	1.3	5.3	. . .					0.5	2.8	1.9	6.3					0.1	3.2	1.5	6.6	
	W	24	1:12	6:20	11:49	18:44			S	24	2:37	8:20	12:43	19:36			Tu	24	2:44	8:20	13:30	20:07	
			1.4	3.1	1.5	5.8					0.1	2.9	1.8	6.7					0.1	3.5	1.2	6.6	
	Th	25	2:05	7:30	12:29	19:22		A	S	25	3:05	8:44	13:15	20:07			W	25	3:00	8:43	14:03	20:37	
			0.8	3.0	1.6	6.3					—0.1	3.0	1.6	7.0					0.2	3.8	0.9	6.5	
S	F	26	2:48	8:21	13:08	19:57			M	26	3:28	9:05	13:45	20:37		E ○	Th	26	3:18	9:05	14:35	21:07	
			0.3	3.0	1.6	6.7					—0.2	3.1	1.3	7.1					0.3	4.2	0.7	6.2	
	S	27	3:25	9:03	13:33	20:30		○	Tu	27	3:49	9:25	14:15	21:05			F	27	3:37	9:32	15:13	21:37	
			0.0	2.9	1.6	7.0					—0.1	3.3	1.1	7.1					0.4	4.5	0.7	5.8	
○ A	S	28	3:56	9:36	14:00	21:00			W	28	4:09	9:47	14:45	21:33			S	28	3:56	10:02	15:53	22:10	
			—0.2	2.9	1.5	7.2					0.0	3.4	1.0	6.9					0.6	4.8	0.8	5.2	
	M	29	4:26	10:00	14:20	21:30		E	Th	29	4:30	10:11	15:19	22:03			S	29	4:17	10:35	16:40	22:45	
			—0.2	2.8	1.4	7.2					0.2	3.7	1.0	6.5					0.7	5.0	1.1	4.5	
	Tu	30	4:53	10:30	14:55	22:00			F	30	4:48	10:40	15:55	22:30			M	30	4:43	11:20	17:40	23:25	
			—0.1	2.9	1.4	7.0					0.4	3.9	1.1	5.9					0.9	5.1	1.5	3.8	
	W	31	5:20	10:58	15:25	22:30			S	31	5:08	11:12	16:37	23:00									
			0.1	3.0	1.4	6.7					0.6	4.1	1.3	5.2									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.9 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	5:10 1.2	12:14 5.1	19:05 1.8	. . . . .
N	W	2	0:26 3.0	5:45 1.6	18:30 5.2	21:20 1.5
☾	Th	3	2:27 2.5	6:44 1.9	15:00 5.4	23:15 1.2
	F	4	4:43 2.6	8:50 2.1	16:20 5.8	. . . . .
	S	5	0:08 0.6	5:57 3.0	10:35 1.9	17:23 6.3
	S	6	0:50 0.0	6:40 3.5	11:40 1.5	18:15 6.7
P	M	7	1:25 —0.3	7:16 4.0	12:30 1.1	19:00 6.9
	Tu	8	2:00 —0.6	7:53 4.4	13:21 0.7	19:44 7.0
E	W	9	2:30 —0.6	8:27 4.8	14:05 0.5	20:25 6.8
●	Th	10	3:00 —0.4	8:50 5.0	14:48 0.4	21:05 6.4
	F	11	3:33 —0.1	9:36 5.2	15:31 0.5	21:45 5.8
	S	12	4:05 0.3	10:12 5.2	16:18 0.8	22:25 5.0
	S	13	4:30 0.8	10:50 5.2	17:10 1.1	23:08 4.1
	M	14	4:55 1.3	11:32 5.1	18:17 1.5	23:56 3.3
	Tu	15	5:15 1.8	12:24 5.0	20:00 1.7	. . . . .
	W	16	1:18 2.6	5:16 2.2	13:30 4.9	22:32 1.5
☽	Th	17	14:50 4.9	23:47 1.1	. . . . .	. . . . .
	F	18	16:06 5.1	. . . . .	. . . . .	. . . . .
A	S	19	0:27 0.8	7:24 2.9	10:15 2.7	17:05 5.4
	S	20	0:55 0.5	7:10 3.0	11:16 2.5	17:50 5.6
	M	21	1:16 0.5	7:10 3.3	11:57 2.1	18:27 5.7
	Tu	22	1:34 0.5	7:22 3.7	12:37 1.6	19:00 5.8
E	W	23	1:50 0.5	7:40 4.1	13:15 1.2	19:35 5.8
	Th	24	2:07 0.6	8:02 4.6	13:52 0.8	20:10 5.6
○	F	25	2:25 0.6	8:30 5.0	14:35 0.6	20:44 5.2
	S	26	2:47 0.7	9:00 5.4	15:14 0.6	21:20 4.8
	S	27	3:10 0.8	9:35 5.7	16:00 0.6	22:00 4.8
	M	28	3:37 0.9	10:15 5.9	16:55 0.8	22:42 3.6
	Tu	29	4:07 1.1	11:00 5.9	18:00 1.0	23:40 3.1
N	W	30	4:40 1.4	11:55 5.8	19:25 1.1	. . . . .
	Th	31	1:08 2.7	5:25 1.8	13:05 5.7	21:08 1.0

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	2:50 2.6	6:40 2.1	14:23 5.7	22:24 0.6
	S	2	4:28 2.9	8:40 2.3	15:40 5.8	23:20 0.3
P	S	3	5:27 3.4	10:19 2.1	16:45 6.0	. . . . .
	M	4	0:08 0.0	6:10 4.0	11:28 1.7	17:44 6.1
E	Tu	5	0:43 —0.2	6:45 4.5	12:25 1.2	18:37 6.1
	W	6	1:18 —0.2	7:25 4.9	13:14 0.8	19:21 6.0
	Th	7	1:50 —0.1	8:00 5.3	14:02 0.6	20:06 5.6
●	F	8	2:23 0.2	8:35 5.6	14:48 0.4	20:50 5.2
	S	9	2:58 0.5	9:10 5.8	15:36 0.4	21:33 4.6
	S	10	3:30 0.9	9:46 5.9	16:27 0.6	22:18 3.9
	M	11	3:45 1.3	10:23 5.9	17:23 0.7	23:08 3.3
S	Tu	12	4:06 1.7	11:08 5.8	18:30 1.0	. . . . .
	W	13	0:08 2.7	4:16 2.0	11:48 5.6	19:52 1.1
	Th	14	1:36 2.3	4:06 2.2	12:38 5.4	21:25 1.1
	F	15	13:42 5.2	22:37 1.0	. . . . .	. . . . .
A ☽	S	16	14:50 5.0	23:20 0.9	. . . . .	. . . . .
	S	17	6:58 2.9	8:39 2.9	15:58 5.0	23:49 0.9
	M	18	6:08 3.2	10:30 2.6	16:50 4.9	. . . . .
E	Tu	19	0:10 0.9	6:17 3.6	11:30 2.2	17:40 4.9
	W	20	0:30 1.0	6:35 4.1	12:20 1.7	18:23 4.8
	Th	21	0:50 1.0	7:00 4.7	13:07 1.3	19:00 4.6
	F	22	1:12 0.9	7:30 5.3	13:52 0.9	19:46 4.4
	S	23	1:35 0.9	8:05 5.8	14:38 0.6	20:20 4.2
○	S	24	2:05 0.9	8:40 6.3	15:25 0.4	21:15 3.9
	M	25	2:34 1.0	9:20 6.5	16:16 0.3	22:02 3.5
N	Tu	26	3:07 1.1	10:02 6.7	17:10 0.3	22:56 3.2
	W	27	3:45 1.3	10:50 6.7	18:12 0.3	. . . . .
P	Th	28	0:00 2.9	4:29 1.6	11:40 6.5	19:15 0.3
	F	29	1:15 2.8	5:24 1.9	12:40 6.3	20:20 0.3
	S	30	2:35 3.0	6:40 2.2	13:47 6.0	21:30 0.2

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	3:49 3.4	8:20 2.4	14:56 5.7	22:26 0.2
E	M	2	4:50 3.8	9:54 2.2	16:05 5.5	23:14 0.2
	Tu	3	5:36 4.3	11:13 1.9	17:10 5.2	. . . . .
	W	4	0:00 0.2	6:19 4.9	12:19 1.4	18:10 5.0
	Th	5	0:36 0.3	7:00 5.4	13:16 1.0	19:02 4.7
	F	6	1:13 0.5	7:37 5.8	14:09 0.7	19:54 4.4
	S	7	1:45 0.7	8:14 6.2	15:00 0.4	20:44 4.0
●	S	8	2:17 1.0	8:50 6.4	15:50 0.2	21:33 3.6
S	M	9	2:45 1.3	9:27 6.5	16:40 0.2	22:20 3.2
	Tu	10	3:10 1.5	10:08 6.5	17:30 0.3	23:10 2.8
	W	11	3:30 1.7	10:40 6.4	18:20 0.4	. . . . .
	Th	12	0:08 2.5	3:45 2.0	11:16 6.2	19:14 0.6
A	F	13	1:04 2.4	3:57 2.1	11:57 5.9	20:07 0.7
	S	14	2:13 2.4	4:16 2.3	12:40 5.5	20:57 0.9
	S	15	3:20 2.5	5:00 2.5	13:30 5.1	21:40 1.1
☽	M	16	4:11 2.9	6:48 2.8	14:30 4.7	22:15 1.2
E	Tu	17	4:45 3.3	9:25 2.8	15:25 4.3	22:45 1.3
	W	18	5:20 3.9	11:05 2.5	16:42 4.0	23:16 1.3
	Th	19	5:55 4.5	12:15 1.9	17:45 3.8	23:46 1.3
	F	20	6:30 5.2	13:14 1.4	18:42 3.6	. . . . .
	S	21	0:20 1.2	7:10 5.9	14:05 0.9	19:35 3.5
	S	22	0:55 1.1	7:48 6.5	14:51 0.4	20:27 3.4
N ○	M	23	1:34 1.1	8:28 6.9	15:38 0.0	21:18 3.3
	Tu	24	2:15 1.1	9:10 7.3	16:25 —0.3	22:08 3.2
P	W	25	2:55 1.1	9:52 7.4	17:14 —0.4	23:00 3.1
	Th	26	3:38 1.3	10:38 7.3	18:00 —0.4	. . . . .
	F	27	0:00 3.1	4:26 1.5	11:24 7.0	18:50 —0.3
	S	28	0:58 3.2	5:21 1.8	12:15 6.6	19:44 —0.1
E ☾	S	29	1:55 3.4	6:26 2.1	13:10 6.0	20:36 0.1
	M	30	3:00 3.6	7:51 2.4	14:13 5.4	21:30 0.3
	Tu	31	4:06 4.0	9:30 2.5	15:20 4.8	22:24 0.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 2.9 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart unless a minus (—) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
JANUARY.						
	M	1	1:25 2.8	7:45 6.3	15:04 —0.8	22:30 4.1
	Tu	2	2:27 3.2	8:30 6.6	15:55 —1.3	23:27 4.1
N	W	3	3:22 3.2	9:19 6.7	16:45 —1.7	. . . . .
○ P	Th	4	0:17 4.2	4:05 3.2	10:10 6.7	17:33 —1.8
	F	5	1:05 4.3	5:04 3.2	11:02 6.5	18:22 —1.7
	S	6	1:50 4.5	6:05 3.2	11:57 6.2	19:09 —1.3
	S	7	2:30 4.8	7:10 3.1	12:52 5.7	19:55 —0.8
	M	8	3:10 5.3	8:16 2.8	13:56 5.1	20:40 —0.1
E	Tu	9	3:52 5.4	9:25 2.5	15:05 4.6	21:28 0.6
☾	W	10	4:36 5.5	10:39 2.1	16:34 4.1	22:19 1.2
	Th	11	5:18 5.5	11:52 1.7	18:08 3.8	23:06 1.9
	F	12	6:00 5.6	12:52 1.2	19:37 3.6	23:55 2.5
	S	13	6:42 5.7	13:55 0.7	20:57 3.7	. . . . .
	S	14	0:46 3.1	7:22 5.8	14:47 0.2	22:08 3.7
	M	15	1:38 3.2	8:00 5.8	15:30 —0.2	23:00 3.8
	Tu	16	2:30 3.4	8:37 5.9	16:10 —0.5	23:45 3.8
S A	W	17	3:21 3.6	9:17 5.8	16:45 —0.7	. . . . .
	Th	18	0:24 4.0	4:05 3.6	9:52 5.8	17:17 —0.7
●	F	19	0:59 4.1	4:50 3.5	10:30 5.6	17:50 —0.7
	S	20	1:28 4.2	5:35 3.3	11:08 5.6	18:23 —0.5
	S	21	1:52 4.7	6:17 3.0	11:44 5.3	18:56 —0.2
	M	22	2:10 4.8	7:00 3.0	12:23 5.0	19:28 0.2
	Tu	23	2:33 4.9	7:47 2.7	13:08 4.7	20:07 0.6
E	W	24	2:56 5.0	8:39 2.3	14:05 4.3	20:45 1.2
	Th	25	3:20 5.1	9:37 1.9	15:12 3.9	21:22 1.7
	F	26	3:48 5.3	10:30 1.4	16:30 3.6	22:03 2.1
☽	S	27	4:27 5.5	11:37 0.9	18:30 3.4	22:56 2.8
	S	28	5:15 5.7	12:45 0.3	20:24 3.3	23:45 3.1
	M	29	6:10 5.9	13:49 —0.3	21:32 3.5	. . . . .
	Tu	30	1:08 3.2	7:10 6.2	14:46 —0.8	22:26 3.8
N	W	31	1:57 3.2	8:10 6.4	15:40 —1.2	23:12 4.1
FEBRUARY.						
P	Th	1	3:11 3.2	9:10 6.4	16:30 —1.4	23:52 4.4
○	F	2	4:12 3.2	10:16 6.5	17:16 —1.4	. . . . .
	S	3	0:31 4.6	5:08 2.8	11:02 6.3	18:00 —1.2
	S	4	1:06 5.2	6:04 2.4	11:58 6.0	18:44 —0.7
	M	5	1:40 5.3	7:00 2.1	12:52 5.5	19:25 —0.1
E	Tu	6	2:18 5.4	7:57 1.9	13:55 5.0	20:12 0.6
	W	7	2:55 5.5	8:57 1.7	15:04 4.4	20:53 1.4
	Th	8	3:32 5.5	9:58 1.5	16:17 4.0	21:36 2.1
☾	F	9	4:15 5.5	11:02 1.2	18:02 3.7	22:18 2.8
	S	10	4:58 5.5	12:15 0.9	19:37 3.5	23:10 3.1
	S	11	5:47 5.4	13:23 0.6	20:57 3.5	. . . . .
	M	12	0:08 3.1	6:38 5.5	14:18 0.3	21:57 3.5
S	Tu	13	1:20 2.8	7:27 5.5	15:02 0.3	22:42 3.9
A	W	14	2:24 2.8	8:13 5.5	15:40 —0.2	23:13 4.0
	Th	15	3:18 2.8	8:57 5.5	16:13 —0.4	23:42 4.3
	F	16	4:00 3.2	9:42 5.5	16:45 —0.4	. . . . .
●	S	17	0:07 4.7	4:40 3.1	10:25 5.5	17:17 —0.3
	S	18	0:25 4.8	5:18 2.7	11:08 5.4	17:49 —0.1
	M	19	0:43 4.9	5:56 2.4	11:48 5.2	18:20 0.3
E	Tu	20	1:02 5.0	6:40 2.0	12:26 5.0	18:58 0.5
	W	21	1:22 5.1	7:21 1.6	13:12 4.6	19:33 1.3
	Th	22	1:45 5.2	8:10 1.2	14:02 4.3	20:06 1.8
	F	23	2:12 5.3	8:57 1.0	15:12 3.9	20:47 2.3
	S	24	2:47 5.4	10:00 0.7	16:53 3.8	21:32 2.8
☽	S	25	3:34 5.5	11:10 0.5	19:02 3.3	22:13 3.1
	M	26	4:32 5.6	12:20 0.0	20:28 3.5	23:40 3.2
N	Tu	27	5:43 5.7	13:29 —0.3	21:21 3.7	. . . . .
	W	28	1:02 3.3	6:57 5.9	14:27 —0.6	22:02 4.0
	Th	29	2:12 3.2	8:05 6.0	15:20 —0.8	22:40 4.4
MARCH.						
P	F	1	3:15 2.9	9:08 6.1	16:08 —0.8	23:12 4.8
	S	2	4:10 2.4	10:07 6.1	16:52 —0.6	23:43 5.3
○	S	3	5:02 1.9	11:02 6.0	17:33 —0.2	. . . . .
E	M	4	0:15 5.5	5:52 1.5	11:57 5.7	18:15 0.3
	Tu	5	0:47 5.6	6:42 1.2	12:51 5.2	18:57 0.9
	W	6	1:20 5.5	7:33 1.0	13:48 4.8	19:35 1.5
	Th	7	1:52 5.5	8:19 0.9	14:57 4.3	20:12 2.2
	F	8	2:27 5.5	9:17 0.8	16:23 3.8	20:54 2.8
	S	9	3:05 5.3	10:22 0.8	18:04 3.6	21:42 3.2
☾	S	10	3:48 5.2	11:28 0.7	19:33 3.8	22:43 3.4
S	M	11	4:41 5.1	12:36 0.6	20:40 4.0	. . . . .
A	Tu	12	0:02 3.6	5:48 4.9	13:30 0.4	21:28 4.2
	W	13	1:18 3.7	6:58 5.0	14:16 0.3	21:55 4.4
	Th	14	2:16 3.4	7:58 5.1	14:56 0.2	22:21 4.7
	F	15	2:59 3.1	8:45 5.1	15:27 0.2	22:42 4.9
	S	16	3:40 2.7	9:31 5.2	16:05 0.2	23:00 5.0
	S	17	4:18 2.2	10:14 5.3	16:38 0.4	23:18 5.1
●	M	18	4:58 1.7	10:56 5.2	17:17 0.7	23:37 5.2
E	Tu	19	5:35 1.3	11:38 5.1	17:52 1.1	23:58 5.3
	W	20	6:15 0.9	12:28 4.9	18:27 1.6	. . . . .
	Th	21	0:24 5.3	6:52 0.5	13:20 4.6	19:01 2.1
	F	22	0:51 5.5	7:40 0.3	14:24 4.2	19:37 2.6
	S	23	1:23 5.5	8:36 0.2	15:43 3.8	20:17 3.1
	S	24	2:00 5.6	9:38 0.1	17:30 3.5	21:07 3.2
N ☽	M	25	2:51 5.5	10:47 0.0	19:06 3.7	22:02 3.3
	Tu	26	4:02 5.4	11:57 —0.1	20:05 4.0	23:50 3.5
	W	27	5:30 5.3	13:08 —0.1	20:48 4.3	. . . . .
P	Th	28	1:05 3.3	6:55 5.3	14:02 —0.2	21:22 4.7
	F	29	2:20 2.8	8:08 5.5	14:52 —0.1	21:50 5.2
	S	30	3:15 2.1	9:12 5.6	15:37 0.1	22:22 5.4
	S	31	4:05 1.5	10:11 5.6	16:25 0.5	22:52 5.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon, ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	4:51 1.0	11:05 5.4	17:07 0.9	23:22 5.6
	Tu	2	5:37 0.6	12:00 5.2	17:43 1.4	23:53 5.7
	W	3	6:17 0.3	12:57 4.9	18:21 1.9	. . . . .
	Th	4	0:28 5.7	7:04 0.2	14:00 4.5	18:57 2.4
	F	5	0:56 5.6	7:54 0.2	15:10 4.1	19:35 3.0
	S	6	1:27 5.4	8:45 0.3	16:33 3.8	20:10 3.2
S	S	7	2:02 5.3	9:40 0.4	17:59 3.8	21:02 3.1
	M	8	2:40 4.9	10:38 0.5	19:06 3.9	22:22 2.6
☾ A	Tu	9	3:38 4.6	11:37 0.6	19:57 4.3	23:58 2.5
	W	10	5:02 4.5	12:30 0.6	20:30 4.6	. . . . .
	Th	11	1:07 3.5	6:25 4.4	13:17 0.7	20:58 4.8
	F	12	1:58 3.0	7:33 4.5	14:00 0.8	21:12 4.9
	S	13	2:38 2.7	8:28 4.7	14:45 0.9	21:32 5.1
	S	14	3:18 1.9	9:18 4.8	15:26 1.0	21:52 5.3
E	M	15	3:55 1.3	10:08 4.9	16:01 1.3	22:13 5.4
	Tu	16	4:32 0.7	10:52 5.0	16:38 1.6	22:40 5.5
●	W	17	5:05 0.2	11:44 4.9	17:15 2.0	23:08 5.7
	Th	18	5:50 −0.2	12:39 4.7	17:51 2.4	23:37 5.8
	F	19	6:36 −0.5	13:40 4.3	18:28 2.8	. . . . .
	S	20	0:09 5.9	7:25 −0.6	14:50 4.0	19:07 3.1
N	S	21	0:43 5.7	8:20 −0.5	16:12 3.9	19:47 3.3
P	M	22	1:28 5.6	9:20 −0.4	17:35 4.0	20:51 3.4
	Tu	23	2:26 5.3	10:24 −0.2	18:38 4.2	22:32 3.5
☽	W	24	3:50 5.0	11:30 0.0	19:22 4.5	. . . . .
	Th	25	0:08 3.3	5:32 4.8	12:30 0.2	19:58 5.0
	F	26	1:18 2.8	7:01 4.8	13:26 0.6	20:30 5.2
	S	27	2:18 2.0	8:17 4.9	14:24 0.9	21:03 5.5
E	S	28	3:10 1.3	9:22 5.0	15:10 1.1	21:36 5.6
	M	29	3:52 0.7	10:18 5.1	15:50 1.6	22:05 5.8
	Tu	30	4:53 0.2	11:17 5.0	16:30 2.0	22:35 5.9

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	5:18 −0.2	12:15 4.7	17:07 2.4	23:06 6.0
	Th	2	6:02 −0.4	13:14 4.0	17:43 2.9	23:37 5.8
	F	3	6:47 −0.4	14:16 4.0	18:20 3.2	. . . . .
	S	4	0:07 5.6	7:30 −0.3	15:22 4.0	19:00 3.3
S	S	5	0:37 5.4	8:15 −0.2	16:30 4.0	19:28 3.5
	M	6	1:08 5.2	9:02 0.1	17:30 4.1	20:42 3.7
A	Tu	7	1:35 4.8	9:50 0.3	18:21 4.4	22:00 3.7
	W	8	2:25 4.6	10:38 0.6	18:55 4.7	23:32 3.6
☾	Th	9	3:56 4.1	11:25 0.8	19:20 4.8	. . . . .
	F	10	0:34 3.2	5:42 4.0	12:19 1.0	19:42 5.0
	S	11	1:24 2.6	7:08 4.1	13:10 1.3	20:05 5.1
E	S	12	2:08 1.9	8:12 4.2	13:52 1.5	20:25 5.3
	M	13	2:47 1.2	9:00 4.4	14:33 1.8	20:48 5.6
	Tu	14	3:22 0.5	9:58 4.6	15:17 2.1	21:18 5.8
	W	15	4:06 −0.2	10:55 4.6	15:57 2.4	21:58 6.0
●	Th	16	4:50 −0.7	11:52 4.3	16:38 2.8	22:27 6.2
	F	17	5:36 −1.1	12:52 4.1	17:18 3.0	23:02 6.3
	S	18	6:24 −1.2	13:55 4.2	17:55 3.2	23:41 6.2
N P	S	19	7:15 −1.2	15:02 4.2	18:45 3.3	. . . . .
	M	20	0:30 5.9	8:07 −1.0	16:08 4.2	19:45 3.4
	Tu	21	1:18 5.5	9:02 −0.6	17:01 4.4	21:10 3.4
	W	22	2:25 5.2	10:00 −0.2	17:48 4.7	22:38 3.2
☽	Th	23	3:54 4.8	10:57 0.2	18:30 5.1	. . . . .
	F	24	0:02 2.8	5:35 4.4	11:55 0.8	19:08 5.4
E	S	25	1:12 2.1	7:08 4.3	12:56 1.3	19:45 5.5
	S	26	2:08 1.4	8:25 4.4	13:43 1.7	20:19 5.7
	M	27	2:53 0.7	9:31 4.4	14:29 2.2	20:51 5.9
	Tu	28	3:40 0.1	10:31 4.2	15:12 2.7	21:23 6.1
	W	29	4:25 −0.3	11:30 4.1	15:52 3.1	21:54 6.1
○	Th	30	5:07 −0.6	12:27 4.0	16:31 3.2	22:27 6.1
	F	31	5:48 −0.8	13:23 4.0	17:10 3.4	23:00 6.0

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	6:28 −0.8	14:18 4.0	17:48 3.5	23:32 5.7
	S	2	7:08 −0.6	15:10 4.0	18:35 3.6	23:59 5.4
	M	3	7:47 −0.4	15:59 4.1	19:20 3.6	. . . . .
A	Tu	4	0:28 5.2	8:24 −0.1	16:40 4.3	20:25 3.7
	W	5	1:04 4.8	9:08 0.2	17:10 4.7	21:35 3.7
	Th	6	1:56 4.5	9:43 0.6	17:37 4.8	22:45 3.4
☾	F	7	3:10 4.1	10:33 0.9	18:08 5.0	23:46 2.9
	S	8	4:50 3.9	11:22 1.3	18:28 5.1	. . . . .
E	S	9	0:42 2.1	6:32 3.7	12:08 1.7	18:52 5.4
	M	10	1:24 1.3	7:40 3.8	12:54 2.1	19:21 5.7
	Tu	11	2:12 0.6	8:56 3.9	13:43 2.4	19:53 5.9
	W	12	3:00 −0.2	10:02 3.9	14:32 2.9	20:34 6.2
	Th	13	3:48 −0.9	11:05 4.0	15:20 3.0	21:16 6.4
●	F	14	4:36 −1.3	12:05 4.1	16:07 3.2	22:00 6.5
N	S	15	5:24 −1.6	12:58 4.1	16:50 3.2	22:45 6.5
P	S	16	6:12 −1.6	13:50 4.2	17:43 3.2	23:32 6.3
	M	17	7:01 −1.5	14:40 4.4	18:40 3.2	. . . . .
	Tu	18	0:25 5.9	7:50 −1.1	15:26 4.6	19:48 3.2
	W	19	1:25 5.4	8:40 −0.6	16:10 4.8	21:08 3.0
	Th	20	2:33 4.9	9:30 −0.1	16:54 5.2	22:25 2.7
☽ E	F	21	3:58 4.4	10:25 0.7	17:36 5.4	23:42 2.2
	S	22	5:37 4.1	11:20 1.4	18:18 5.5	. . . . .
	S	23	0:52 1.6	7:08 4.0	12:10 1.9	18:57 5.7
	M	24	1:47 0.9	8:30 3.9	13:00 2.5	19:35 5.9
	Tu	25	2:42 0.3	9:40 3.7	13:48 3.0	20:12 6.0
	W	26	2:30 −0.3	10:41 3.7	14:35 3.2	20:48 6.1
	Th	27	4:13 −0.6	11:38 3.7	15:21 3.4	21:23 6.1
S	F	28	4:54 −0.8	12:30 4.4	16:07 3.6	21:59 5.9
○	S	29	5:21 −0.9	13:15 4.0	16:45 3.6	22:37 5.8
	S	30	6:06 −0.9	13:57 4.1	17:35 3.6	23:12 5.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
JULY.						
A	M	1	6:40 −0.7	14:28 4.2	18:18 3.4	23:53 5.4
	Tu	2	7:13 −0.4	15:00 4.3	19:00 3.4	. . . . .
	W	3	0:26 5.0	7:45 0.0	15:25 4.7	19:53 3.3
	Th	4	1:05 4.7	8:18 0.3	15:50 4.8	20:52 3.0
	F	5	1:53 4.4	8:59 0.7	16:17 4.9	21:51 2.8
E	S	6	3:00 4.0	9:39 1.3	16:41 5.0	22:55 2.2
☾	S	7	4:34 3.7	10:20 1.7	17:10 5.3	23:43 1.6
	M	8	5:59 3.4	11:05 2.3	17:44 5.5	. . . . .
	Tu	9	0:44 0.9	7:43 3.4	12:00 2.7	18:25 5.8
	W	10	1:43 0.2	9:04 3.4	12:55 3.0	19:14 6.0
	Th	11	2:40 −0.5	10:09 3.6	13:50 3.2	20:05 6.3
N	F	12	3:32 −1.1	11:02 3.7	14:42 3.2	20:48 6.5
	S	13	4:22 −1.5	11:52 3.9	15:40 3.2	21:50 6.5
● P	S	14	5:10 −1.7	12:36 4.3	16:37 3.1	22:43 6.5
	M	15	5:57 −1.6	13:20 4.5	17:35 3.0	23:37 6.2
	Tu	16	6:42 −1.3	14:00 4.8	18:40 2.7	. . . . .
	W	17	0:33 5.9	7:28 −0.8	14:37 5.1	19:42 2.5
	Th	18	1:33 5.3	8:12 −0.1	15:14 5.4	20:47 2.2
E	F	19	2:40 4.7	8:58 0.6	15:59 5.5	21:58 1.9
☽	S	20	4:02 4.2	9:47 1.3	16:43 5.5	23:07 1.6
	S	21	5:28 3.9	10:33 2.0	17:27 5.6	. . . . .
	M	22	0:17 1.1	7:01 3.7	11:21 2.7	18:12 5.7
	Tu	23	1:30 0.7	8:27 3.5	12:15 3.1	18:58 5.8
	W	24	2:29 0.2	9:40 3.6	13:15 3.3	19:43 5.9
	Th	25	3:17 −0.2	10:37 3.7	14:12 3.5	20:27 5.8
S	F	26	3:58 −0.5	11:23 3.9	15:08 3.6	21:10 5.9
	S	27	4:35 −0.6	12:02 4.0	15:55 3.5	21:50 5.8
○ A	S	28	5:07 −0.7	12:36 4.1	16:40 3.4	22:32 5.6
	M	29	5:39 −0.6	13:07 4.2	17:22 3.3	23:10 5.5
	Tu	30	6:10 −0.4	13:33 4.4	18:02 3.2	23:48 5.3
	W	31	6:40 −0.1	13:52 4.6	18:45 2.9	. . . . .
AUGUST.						
	Th	1	0:24 5.1	7:10 0.3	14:13 4.8	19:28 2.6
E	F	2	1:05 4.7	7:45 0.7	14:35 4.9	20:15 2.3
	S	3	1:53 4.3	8:18 1.3	14:55 5.0	21:07 1.9
	S	4	2:50 3.9	8:50 1.8	15:20 5.2	21:57 1.4
☾	M	5	4:05 3.5	9:28 2.3	15:56 5.4	23:03 1.0
	Tu	6	6:00 3.2	10:20 2.7	16:43 5.5	. . . . .
	W	7	0:12 0.5	7:53 3.2	11:17 3.0	17:42 5.8
	Th	8	1:20 0.0	9:05 3.4	12:25 3.2	18:45 6.0
N	F	9	2:20 −0.5	10:00 3.6	13:38 3.3	19:48 6.1
	S	10	3:13 −1.0	10:48 4.0	14:38 3.2	20:48 6.3
	S	11	4:04 −1.2	11:22 4.3	15:38 3.1	21:47 6.4
P ●	M	12	4:50 −1.2	12:00 4.6	16:42 2.6	22:43 6.3
	Tu	13	5:35 −1.0	12:35 4.9	17:36 2.2	23:38 6.0
	W	14	6:18 −0.6	13:08 5.3	18:30 1.8	. . . . .
E	Th	15	0:34 5.7	6:58 0.0	13:44 5.5	19:26 1.5
	F	16	1:38 5.1	7:45 0.7	14:22 5.6	20:25 1.3
	S	17	2:35 4.6	8:25 1.4	15:00 5.5	21:19 1.2
	S	18	3:58 4.1	9:05 2.1	15:43 5.5	22:27 1.0
☽	M	19	5:28 3.7	9:52 2.8	16:29 5.5	23:43 0.7
	Tu	20	7:04 3.3	10:45 3.2	17:23 5.5	. . . . .
	W	21	0:57 0.5	8:29 3.5	11:51 3.4	18:20 5.4
S	Th	22	2:00 0.2	9:32 3.7	13:07 3.6	19:15 5.4
	F	23	2:48 0.0	10:17 3.9	14:17 3.6	20:08 5.5
	S	24	3:28 −0.1	10:50 4.0	15:08 3.5	20:57 5.5
A	S	25	4:02 −0.2	11:20 4.2	15:51 3.2	21:40 5.4
	M	26	4:32 −0.2	11:45 4.5	16:30 2.9	22:23 5.4
○	Tu	27	5:03 0.0	12:07 4.7	17:05 2.6	23:02 5.3
	W	28	5:32 0.2	12:25 4.9	17:42 2.2	23:42 5.1
E	Th	29	6:05 0.5	12:43 5.0	18:20 1.9	. . . . .
	F	30	0:20 4.9	6:40 1.0	13:01 5.1	19:00 1.5
	S	31	0:59 4.6	7:10 1.5	13:20 5.1	19:45 1.2
SEPTEMBER.						
	S	1	1:51 4.3	7:41 1.9	13:45 5.2	20:27 0.9
	M	2	2:57 3.9	8:16 2.4	14:20 5.3	21:26 0.7
	Tu	3	4:27 3.5	8:53 2.7	15:00 5.4	22:31 0.4
☾	W	4	6:24 3.3	9:45 3.0	15:57 5.4	23:43 0.2
N	Th	5	7:53 3.5	10:57 3.2	17:09 5.5	. . . . .
	F	6	0:53 −0.1	8:50 3.7	12:24 3.3	18:28 5.6
	S	7	1:56 −0.4	9:32 4.1	13:43 3.1	19:41 5.8
	S	8	2:50 −0.6	10:07 4.4	14:49 2.8	20:47 5.9
P	M	9	3:40 −0.6	10:40 4.8	15:45 2.3	21:46 6.0
●	Tu	10	4:28 −0.4	11:11 5.3	16:35 1.7	22:43 6.0
E	W	11	5:06 −0.1	11:43 5.5	17:26 1.2	23:38 5.7
	Th	12	5:57 0.4	12:16 5.6	18:17 0.8	. . . . .
	F	13	0:33 5.4	6:32 1.0	12:50 5.6	19:04 0.6
	S	14	1:32 4.9	7:10 1.6	13:26 5.7	19:53 0.5
	S	15	2:40 4.5	7:50 2.2	14:02 5.6	20:50 0.4
	M	16	4:02 3.8	8:30 2.8	14:42 5.5	21:55 0.5
☽	Tu	17	5:32 3.6	9:16 3.2	15:29 5.2	23:02 0.5
S	W	18	7:02 3.6	10:16 3.6	16:28 5.0	. . . . .
	Th	19	0:12 0.5	8:10 3.8	11:36 3.7	17:36 5.0
	F	20	1:12 0.4	8:58 4.1	13:15 3.7	18:46 4.9
A	S	21	2:01 0.3	9:32 4.2	14:18 3.4	19:50 4.9
	S	22	2:40 0.3	10:00 4.5	15:00 3.0	20:45 5.0
	M	23	3:15 0.4	10:22 4.9	15:36 2.6	21:38 5.0
	Tu	24	3:47 0.5	10:41 5.0	16:10 2.1	22:13 5.1
	W	25	4:27 0.7	11:00 5.1	16:43 1.6	22:52 5.0
E ○	Th	26	5:00 1.0	11:18 5.2	17:20 1.2	23:32 5.0
	F	27	5:30 1.3	11:37 5.2	17:57 0.8	. . . . .
	S	28	0:20 4.8	6:01 1.7	12:03 5.4	18:33 0.4
	S	29	1:10 4.5	6:34 2.2	12:38 5.5	19:16 0.2
	M	30	2:08 4.2	7:07 2.6	12:55 5.5	20:06 0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	3:20 3.9	7:42 2.9	13:30 5.6	21:02 0.0
N	W	2	4:52 3.6	8:15 3.2	14:13 5.5	22:07 0.0
☾	Th	3	6:29 3.6	10:17 3.4	15:19 5.3	23:17 0.0
	F	4	7:30 3.9	11:01 3.4	16:51 5.2	. . . . .
	S	5	0:28 0.0	8:13 4.1	12:36 3.8	18:25 5.2
	S	6	1:25 0.0	8:48 4.6	13:50 2.8	19:43 5.2
P	M	7	2:19 0.2	9:20 5.1	14:48 2.0	20:50 5.3
	Tu	8	3:07 0.4	9:50 5.4	15:40 1.3	21:50 5.4
E	W	9	3:58 0.7	10:22 5.5	16:28 0.7	22:48 5.5
●	Th	10	4:40 1.0	10:55 5.7	17:08 0.3	23:43 5.3
	F	11	5:18 1.5	11:27 5.9	17:55 0.0	. . . . .
	S	12	0:42 5.0	5:57 2.0	12:01 5.9	18:43 —0.2
	S	13	1:44 4.4	6:33 2.5	12:35 5.8	19:33 —0.3
	M	14	2:54 4.0	7:18 3.1	13:12 5.6	20:34 —0.1
S	Tu	15	4:08 3.8	7:55 3.2	13:50 5.3	21:20 0.1
	W	16	5:27 3.9	8:36 3.5	14:36 5.1	22:17 0.3
☽	Th	17	6:35 3.9	10:05 3.7	15:39 4.8	23:15 0.4
	F	18	7:27 4.2	11:47 3.8	17:02 4.4	. . . . .
A	S	19	0:10 0.6	8:05 4.4	13:07 3.5	18:23 4.3
	S	20	0:57 0.8	8:32 4.9	13:58 3.0	19:33 4.3
	M	21	1:42 1.0	8:58 5.0	14:38 2.5	20:29 4.5
	Tu	22	2:27 1.2	9:16 5.1	15:11 1.9	21:18 4.5
E	W	23	3:05 1.3	9:37 5.2	15:45 1.3	21:58 4.7
	Th	24	3:39 1.6	9:56 5.4	16:14 0.8	22:46 4.7
○	F	25	4:13 1.8	10:21 5.5	16:50 0.2	23:35 4.7
	S	26	4:49 2.2	10:49 5.7	17:30 —0.2	. . . . .
	S	27	0:27 4.4	5:28 2.6	11:16 5.8	18:16 —0.5
	M	28	1:25 4.1	5:59 3.0	11:45 6.0	19:00 —0.6
	Tu	29	2:28 3.9	6:28 3.2	12:18 5.8	19:52 —0.6
N	W	30	3:42 3.8	7:13 3.2	12:58 5.6	20:45 —0.5
	Th	31	4:57 3.9	8:13 3.4	13:54 5.5	21:46 —0.3

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	5:57 4.1	9:30 3.5	15:07 5.1	22:50 0.0
	S	2	6:44 4.4	11:20 3.4	16:50 4.9	23:51 0.3
P	S	3	7:22 4.9	12:43 2.8	18:28 4.6	. . . . .
	M	4	0:48 0.7	7:57 5.2	13:50 2.0	19:50 4.7
E	Tu	5	1:48 1.1	8:32 5.4	14:43 1.3	20:57 4.8
	W	6	2:37 1.4	9:05 5.7	15:25 0.6	21:58 4.9
	Th	7	3:20 1.8	9:40 5.9	16:42 0.0	22:59 4.6
●	F	8	4:02 2.2	10:10 6.1	16:57 —0.4	23:57 4.4
	S	9	4:40 2.6	10:45 6.1	17:43 —0.7	. . . . .
	S	10	0:57 4.2	5:18 3.2	11:21 6.0	18:29 —0.8
	M	11	1:55 4.0	5:57 3.2	11:57 5.9	19:14 —0.7
S	Tu	12	2:58 4.0	6:35 3.4	12:30 5.6	20:00 —0.5
	W	13	4:00 4.0	7:22 3.5	13:05 5.4	20:46 —0.2
	Th	14	4:59 4.1	8:10 3.7	13:43 4.9	21:31 0.1
	F	15	5:50 4.3	9:45 3.9	14:35 4.6	22:18 0.5
A ☽	S	16	6:30 4.6	11:18 3.6	16:03 4.3	23:04 0.8
	S	17	6:57 4.8	12:28 3.2	17:37 3.9	23:55 1.1
	M	18	7:22 5.0	13:20 2.7	18:57 3.8	. . . . .
E	Tu	19	0:43 1.4	8:47 5.1	14:00 2.0	20:03 3.9
	W	20	1:25 1.7	8:10 5.3	14:30 1.3	20:56 4.1
	Th	21	2:05 2.0	8:32 5.6	15:08 0.6	21:51 4.2
	F	22	2:50 2.3	9:00 5.8	15:50 0.0	22:47 4.1
	S	23	3:29 2.6	9:35 6.0	16:32 —0.6	23:42 4.0
○	S	24	4:10 2.8	10:07 6.1	17:17 —1.0	. . . . .
	M	25	0:40 4.0	4:45 3.0	10:42 6.3	18:02 —1.2
N	Tu	26	1:36 3.9	5:24 3.2	11:20 6.2	18:50 —1.2
	W	27	2:35 4.0	6:13 3.2	12:05 6.0	19:40 —1.1
P	Th	28	3:32 4.2	7:10 3.3	12:54 5.6	20:30 —0.8
	F	29	4:33 4.3	8:23 3.3	13:55 5.2	21:23 —0.3
	S	30	5:10 4.6	9:54 3.2	15:15 4.8	22:18 0.2

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	5:51 5.1	11:18 2.8	16:58 4.3	23:15 0.8
E	M	2	6:33 5.3	12:35 2.1	18:30 4.2	. . . . .
	Tu	3	0:15 1.3	7:10 5.5	13:36 1.4	19:52 4.2
	W	4	1:07 1.8	7:47 5.7	14:26 0.7	21:03 4.3
	Th	5	1:58 2.3	8:22 5.9	15:17 0.0	22:08 4.1
	F	6	2:40 2.8	8:59 6.1	16:05 —0.5	23:08 4.1
	S	7	3:25 3.2	9:35 6.2	16:50 —0.9	. . . . .
●	S	8	0:07 4.0	4:06 3.2	10:12 6.2	17:33 —1.1
S	M	9	1:02 4.0	4:45 3.4	10:50 6.0	18:14 —1.0
	Tu	10	1:55 4.0	5:27 3.5	11:28 5.8	18:55 —0.9
	W	11	2:45 4.1	6:02 3.5	12:05 5.6	19:33 —0.6
	Th	12	3:32 4.1	7:10 3.5	12:39 5.2	20:10 —0.3
A	F	13	4:18 4.3	8:08 3.5	13:18 4.9	20:47 0.1
	S	14	4:45 4.5	9:16 3.7	14:03 4.5	21:25 0.5
	S	15	5:18 4.8	10:23 3.3	15:09 4.1	22:10 1.0
☽	M	16	5:42 5.0	11:30 2.9	16:40 3.8	22:53 1.4
E	Tu	17	6:09 5.1	12:25 2.2	18:18 3.5	23:35 1.8
	W	18	6:35 5.3	13:08 1.6	19:34 3.6	. . . . .
	Th	19	0:20 2.1	7:02 5.5	13:58 0.8	20:48 3.6
	F	20	1:10 2.7	7:35 5.8	14:42 0.1	21:52 3.6
	S	21	2:01 2.9	8:15 6.1	15:32 —0.6	22:51 3.8
	S	22	2:50 3.1	8:50 6.3	16:15 —1.1	23:45 3.9
N ○	M	23	3:38 3.2	9:41 6.4	17:03 —1.4	. . . . .
	Tu	24	0:37 4.0	4:21 3.2	10:27 6.5	17:51 —1.6
P	W	25	1:25 4.2	5:14 3.2	11:15 6.3	18:37 —1.5
	Th	26	2:12 4.4	6:12 3.2	12:07 6.1	19:25 —1.1
	F	27	2:54 4.6	7:17 3.2	13:03 5.6	20:10 —0.6
	S	28	3:34 4.8	8:30 2.9	14:07 5.1	20:57 0.0
E	S	29	4:16 5.2	9:42 2.6	15:24 4.5	21:48 0.7
☾	M	30	4:58 5.4	10:59 2.1	16:57 4.1	22:41 1.3
	Tu	31	5:40 5.5	12:18 1.5	18:30 3.9	23:30 2.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:06	9:32	16:48	23:12
			3.6	9.0	−0.4	6.1
	Tu	2	4:15	10:26	17:42	. . .
			4.0	9.3	−1.1	. . .
N	W	3	0:10	5:20	11:18	18:32
			6.6	4.0	9.6	−1.7
○ P	Th	4	1:00	6:18	12:10	19:20
			7.1	3.8	9.8	−2.0
	F	5	1:48	7:14	13:02	20:08
			7.5	3.4	9.8	−2.0
	S	6	2:33	8:07	13:52	20:53
			7.8	3.1	9.6	−1.7
	S	7	3:17	9:02	14:44	21:35
			8.0	2.8	9.1	−1.1
	M	8	4:01	9:58	15:39	22:20
			8.2	2.5	8.5	−0.4
E	Tu	9	4:42	10:58	16:37	23:05
			8.4	2.2	7.7	0.4
	W	10	5:27	11:58	17:41	23:53
			8.4	2.0	6.9	1.3
☾	Th	11	6:15	13:00	18:58	. . .
			8.3	1.8	6.4	. . .
	F	12	0:54	7:08	14:12	20:12
			2.1	8.3	1.4	6.0
	S	13	1:56	8:03	15:20	21:33
			3.0	8.3	1.0	5.9
	S	14	2:58	9:00	16:22	22:45
			3.4	8.3	0.5	6.1
	M	15	4:00	9:50	17:12	23:42
			3.9	8.3	0.0	6.3
	Tu	16	4:59	10:38	17:57	. . .
			4.1	8.4	−0.4	. . .
S A	W	17	0:27	5:50	11:20	18:35
			6.7	4.0	8.4	−0.6
	Th	18	1:04	6:32	12:00	19:08
			6.9	4.0	8.5	−0.7
●	F	19	1:35	7:10	12:37	19:40
			7.1	3.9	8.4	−0.7
	S	20	2:08	7:42	13:13	20:07
			7.2	3.7	8.4	−0.5
	S	21	2:32	8:15	13:50	20:35
			7.4	3.4	8.3	−0.3
	M	22	2:58	8:48	14:27	21:02
			7.6	3.0	8.1	0.1
	Tu	23	3:25	9:23	15:08	21:30
			7.9	2.7	7.8	0.5
E	W	24	3:56	9:58	15:51	22:02
			8.1	2.3	7.3	1.1
	Th	25	4:30	10:50	16:43	22:41
			8.2	2.0	6.7	1.8
	F	26	5:14	11:43	17:45	23:20
			8.3	1.7	6.0	2.5
☽	S	27	6:00	12:52	19:05	. . .
			8.3	1.4	5.4	. . .
	S	28	0:08	6:55	14:08	20:37
			3.1	8.3	1.0	5.0
	M	29	1:12	7:59	15:27	22:04
			4.0	8.5	0.4	5.5
	Tu	30	2:37	9:05	16:36	23:12
			4.3	8.7	−0.3	6.0
N	W	31	4:06	10:08	17:31	. . .
			4.4	9.0	−0.9	. . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	0:02	5:19	11:08	18:20
			6.5	4.1	9.4	−1.4
○	F	2	0:47	6:17	12:03	19:05
			7.1	3.4	9.6	−1.6
	S	3	1:27	7:10	12:55	19:48
			7.7	2.7	9.6	−1.5
	S	4	2:06	7:58	13:45	20:28
			8.1	2.2	9.4	−1.1
	M	5	2:44	8:47	14:33	21:07
			8.6	1.8	8.9	−0.5
E	Tu	6	3:25	9:35	15:23	21:47
			8.8	1.4	8.3	0.2
	W	7	4:00	10:20	16:13	22:25
			8.8	1.3	7.8	1.0
	Th	8	4:40	11:15	17:10	23:13
			8.7	1.3	6.8	1.9
☾	F	9	5:27	12:18	18:16	. . .
			8.5	1.3	6.0	. . .
	S	10	0:02	6:16	13:27	19:38
			2.7	8.2	1.3	5.5
	S	11	1:00	7:13	14:41	21:09
			3.5	8.0	1.1	5.4
	M	12	2:16	8:15	15:48	22:28
			4.2	7.8	0.8	5.7
S	Tu	13	3:37	9:18	16:43	23:22
			4.5	7.8	0.4	6.4
A	W	14	4:45	10:13	17:29	. . .
			4.2	7.9	0.1	. . .
	Th	15	0:01	5:35	11:02	18:07
			6.8	3.8	8.0	−0.2
	F	16	0:23	6:17	11:44	18:40
			7.2	3.6	8.2	−0.3
●	S	17	1:00	6:52	12:23	19:11
			7.5	3.3	8.3	−0.2
	S	18	1:26	7:23	13:00	19:38
			7.8	2.8	8.4	−0.1
	M	19	1:53	7:55	13:38	20:06
			8.0	2.3	8.3	0.2
E	Tu	20	2:20	8:22	14:16	20:32
			8.3	1.9	8.1	0.6
	W	21	2:50	8:55	14:57	21:02
			8.5	1.4	7.8	1.2
	Th	22	3:21	9:38	15:41	21:37
			8.5	1.1	7.3	1.8
	F	23	3:55	10:24	16:30	22:09
			8.6	0.9	6.7	2.4
	S	24	4:33	11:20	17:32	22:48
			8.5	0.9	5.9	3.1
☽	S	25	5:20	12:27	18:58	23:38
			8.4	0.8	5.4	4.4
	M	26	6:20	13:48	20:37	. . .
			8.2	0.7	5.3	. . .
N	Tu	27	0:56	7:34	15:12	22:03
			4.5	8.1	0.4	5.8
	W	28	2:48	8:51	16:19	23:00
			4.5	8.2	−0.1	6.5
	Th	29	4:18	10:03	17:15	23:43
			4.1	8.5	−0.5	7.1

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	5:20	11:05	18:02	. . .
			3.3	8.8	−0.6	. . .
	S	2	0:21	6:12	12:00	18:45
			7.8	2.6	9.1	−0.8
○	S	3	0:57	7:00	12:50	19:23
			8.3	1.8	9.2	−0.6
E	M	4	1:32	7:42	13:35	20:00
			8.8	1.2	9.0	−0.1
	Tu	5	2:07	8:20	14:20	20:35
			9.0	0.7	8.6	0.5
	W	6	2:43	9:05	15:05	21:13
			9.1	0.6	8.1	1.2
	Th	7	3:20	9:50	15:50	21:52
			9.0	0.6	7.3	1.9
	F	8	3:57	10:40	16:42	22:28
			8.8	0.7	6.6	2.7
	S	9	4:37	11:33	17:43	23:12
			8.4	0.9	6.0	3.4
☾	S	10	5:24	12:38	19:02	. . .
			8.0	1.1	5.6	. . .
S	M	11	0:10	6:20	13:49	20:37
			4.1	7.5	1.2	6.1
A	Tu	12	1:38	7:30	15:00	21:51
			4.4	7.2	1.1	6.1
	W	13	3:12	8:44	15:59	22:40
			4.4	7.1	0.9	6.6
	Th	14	4:20	9:45	16:46	23:16
			4.1	7.2	0.7	7.1
	F	15	5:08	10:38	17:26	23:46
			3.6	7.6	0.5	7.4
	S	16	5:48	11:22	18:02	. . .
			3.0	7.9	0.5	. . .
	S	17	0:14	6:23	12:05	18:34
			7.9	2.3	8.1	0.6
●	M	18	0:41	6:51	12:45	19:03
			8.2	1.7	8.2	0.7
E	Tu	19	1:10	7:21	13:24	19:34
			8.5	1.1	8.2	1.0
	W	20	1:39	7:58	14:05	20:08
			8.7	0.6	8.1	1.4
	Th	21	2:10	8:36	14:47	20:41
			8.9	0.2	7.8	2.0
	F	22	2:42	9:19	15:34	21:13
			8.9	0.1	7.2	2.6
	S	23	3:20	10:06	16:26	21:50
			8.8	0.0	6.6	3.2
	S	24	4:02	11:04	17:32	22:38
			8.6	0.2	6.1	3.7
N ☽	M	25	4:54	12:12	19:00	23:44
			8.3	0.4	5.9	4.4
	Tu	26	6:01	13:31	20:35	. . .
			7.9	0.5	6.1	. . .
	W	27	1:27	7:24	14:49	21:43
			4.4	7.7	0.4	6.6
P	Th	28	3:08	8:49	15:54	22:31
			4.1	7.7	0.3	7.1
	F	29	4:19	10:00	16:49	23:11
			3.3	8.0	0.2	7.7
	S	30	5:14	11:00	17:36	23:47
			2.4	8.3	0.2	8.3
	S	31	6:00	11:52	18:17	. . .
			1.5	8.5	0.4	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	0:20 8.7	6:40 0.8	12:39 8.6	18:54 0.7
	Tu	2	0:56 9.0	7:22 0.3	13:23 8.4	19:33 1.1
	W	3	1:29 9.1	8:03 0.0	14:06 8.1	20:10 1.7
	Th	4	2:02 9.1	8:44 −0.1	14:48 7.5	20:42 2.2
	F	5	2:37 9.0	9:26 0.0	15:32 7.0	21:14 2.9
	S	6	3:12 8.6	10:08 0.2	16:21 6.4	21:51 3.4
S	S	7	3:51 8.2	10:55 0.6	17:18 6.1	22:34 3.9
	M	8	4:35 7.7	11:49 0.9	18:26 5.6	23:37 4.4
☾ A	Tu	9	5:29 7.2	12:48 1.2	19:44 6.1	. . . . .
	W	10	1:04 4.4	6:38 6.8	13:52 1.3	20:51 6.4
	Th	11	2:34 4.3	7:57 6.6	14:58 1.4	21:37 6.8
	F	12	3:41 3.7	9:08 6.8	15:46 1.4	22:14 7.2
	S	13	4:30 3.0	10:05 7.1	16:30 1.4	22:49 7.7
	S	14	5:08 2.2	10:57 7.4	17:10 1.4	23:22 8.1
E	M	15	5:41 1.5	11:42 7.7	17:48 1.4	23:58 8.5
	Tu	16	6:20 0.7	12:26 8.0	18:29 1.6	. . . . .
●	W	17	0:26 8.8	6:57 0.1	13:10 8.0	19:04 2.0
	Th	18	1:00 9.1	7:37 −0.4	13:54 7.8	19:40 2.4
	F	19	1:35 9.2	8:21 −0.8	14:42 7.5	20:16 2.8
	S	20	2:12 9.2	9:08 −0.8	15:33 7.1	20:57 3.3
N	S	21	2:55 9.0	10:00 −0.7	16:30 6.8	21:46 3.8
P	M	22	3:42 8.6	10:57 −0.4	17:35 6.6	22:46 4.1
	Tu	23	4:41 8.1	12:01 0.0	18:52 6.6	. . . . .
☽	W	24	0:12 4.2	5:54 7.6	13:09 0.4	20:06 6.9
	Th	25	1:46 3.9	7:21 7.3	14:19 0.7	21:04 7.3
	F	26	3:05 3.2	8:44 7.3	15:21 0.9	21:49 7.7
	S	27	4:08 2.8	9:58 7.5	16:15 1.2	22:30 8.2
E	S	28	4:55 1.5	10:52 7.7	17:01 1.3	23:10 8.6
	M	29	5:41 0.7	11:42 7.9	17:49 1.6	23:45 8.9
	Tu	30	6:25 0.1	12:30 7.8	18:29 2.0	. . . . .
MAY.						
○	W	1	0:21 9.1	7:08 −0.3	13:14 7.7	19:05 2.4
	Th	2	0:54 9.2	7:47 −0.5	13:56 7.4	19:40 2.9
	F	3	1:29 9.1	8:26 −0.5	14:39 7.0	20:12 3.3
	S	4	2:02 8.8	9:05 −0.4	15:21 6.8	20:48 3.6
S	S	5	2:37 8.5	9:44 −0.1	16:07 6.5	21:27 4.0
	M	6	3:16 8.0	10:22 0.3	16:54 6.4	22:14 4.2
A	Tu	7	3:57 7.5	11:06 0.6	17:44 6.4	23:16 4.3
	W	8	4:48 7.0	11:54 1.0	18:38 6.5	. . . . .
☾	Th	9	0:30 4.2	5:52 6.6	12:44 1.3	19:31 6.8
	F	10	1:45 3.9	7:07 6.8	13:38 1.6	20:20 7.2
	S	11	2:34 3.2	8:20 6.8	14:32 1.8	21:02 7.5
E	S	12	3:32 2.5	9:27 6.6	15:27 2.0	21:47 8.0
	M	13	4:21 1.6	10:24 7.0	16:19 2.2	22:30 8.4
	Tu	14	5:06 0.7	11:18 7.2	17:06 2.4	23:07 8.8
	W	15	5:51 −0.1	12:08 7.4	17:47 2.7	23:45 9.2
●	Th	16	6:36 −0.8	12:58 7.5	18:30 3.0	. . . . .
	F	17	0:25 9.4	7:22 −1.2	13:47 7.5	19:12 3.2
	S	18	1:08 9.5	8:10 −1.5	14:40 7.4	20:00 3.5
N P	S	19	1:52 9.4	8:59 −1.4	15:32 7.3	20:52 3.7
	M	20	2:40 9.1	9:50 −1.2	16:28 7.2	21:52 3.8
	Tu	21	3:35 8.6	10:44 −0.8	17:27 7.3	23:08 3.8
	W	22	4:36 8.0	11:41 −0.2	18:25 7.0	. . . . .
☽	Th	23	0:18 3.5	5:49 7.4	12:44 0.4	19:22 7.6
	F	24	1:35 3.0	7:10 7.0	13:42 1.0	20:14 7.9
E	S	25	2:40 2.2	8:29 6.9	14:40 1.5	21:08 8.2
	S	26	3:42 1.5	9:38 7.0	15:40 1.9	21:47 8.5
	M	27	4:37 0.8	10:39 7.1	16:32 2.3	22:34 8.8
	Tu	28	5:27 0.1	11:34 7.2	17:18 2.7	23:12 9.0
	W	29	6:12 −0.4	12:24 7.1	18:00 3.1	23:48 9.1
○	Th	30	6:54 −0.7	13:10 7.0	18:40 3.5	. . . . .
	F	31	0:25 9.0	7:34 −0.8	13:52 6.9	19:17 3.8
JUNE.						
S	S	1	1:00 8.8	8:11 −0.7	14:32 6.9	19:54 4.0
	S	2	1:34 8.6	8:46 −0.5	15:11 6.9	20:32 4.1
	M	3	2:11 8.2	9:20 −0.2	15:50 6.9	21:12 4.2
A	Tu	4	2:47 7.9	9:54 0.1	16:26 6.9	21:58 4.2
	W	5	3:30 7.5	10:29 0.4	17:04 7.0	22:50 4.0
	Th	6	4:18 7.0	11:05 0.8	17:45 7.2	23:47 3.7
☾	F	7	5:14 6.6	11:46 1.2	18:30 7.6	. . . . .
	S	8	0:40 3.3	6:20 6.8	12:32 1.7	19:14 7.6
E	S	9	1:41 2.7	7:34 6.1	13:27 2.2	20:01 7.9
	M	10	2:42 1.9	8:47 6.1	14:22 2.6	20:54 8.3
	Tu	11	3:42 1.1	9:54 6.3	15:17 3.0	21:40 8.7
	W	12	4:36 0.2	10:56 6.4	16:11 3.3	22:26 9.0
	Th	13	5:30 −0.6	11:53 6.6	17:07 3.6	23:12 9.3
●	F	14	6:20 −1.3	12:48 6.9	18:01 3.8	. . . . .
N	S	15	0:00 9.5	7:09 −1.7	13:39 7.0	18:56 3.9
P	S	16	0:49 9.6	7:57 −1.9	14:30 7.2	19:51 3.9
	M	17	1:40 9.4	8:46 −1.8	15:20 7.4	20:49 3.5
	Tu	18	2:31 9.1	9:36 −1.4	16:10 7.6	21:51 3.3
	W	19	3:27 8.6	10:26 −0.8	16:58 7.9	22:56 3.0
	Th	20	4:28 8.0	11:16 −0.1	17:46 8.1	. . . . .
☽ E	F	21	0:01 2.6	5:36 7.3	12:07 0.6	18:37 8.3
	S	22	1:04 2.1	6:50 6.8	13:00 1.4	19:27 8.4
	S	23	2:11 1.7	8:06 6.5	14:08 2.1	20:18 8.5
	M	24	3:17 1.0	9:20 6.4	15:02 2.7	21:08 8.6
	Tu	25	4:18 0.4	10:29 6.4	15:57 3.2	21:58 8.7
	W	26	5:11 −0.1	11:28 6.3	16:50 3.5	22:42 8.8
	Th	27	5:59 −0.5	12:20 6.4	17:40 3.8	23:25 8.6
S	F	28	6:40 −0.8	13:06 6.5	18:27 4.1	. . . . .
○	S	29	0:04 8.7	7:19 −0.8	13:44 6.8	19:09 4.2
	S	30	0:41 8.6	7:58 −0.8	14:18 6.8	19:47 4.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	1:17	8:25	14:50	20:22
			8.4	−0.6	7.1	4.0
	Tu	2	1:52	8:54	15:22	20:59
			8.1	−0.3	7.2	3.8
	W	3	2:30	9:23	15:50	21:38
			7.8	0.0	7.4	3.6
	Th	4	3:10	9:52	16:20	22:18
			7.5	0.4	7.6	3.3
	F	5	3:53	10:23	16:55	23:00
			7.1	0.8	7.8	2.9
E	S	6	4:45	10:58	17:32	23:54
			6.7	1.4	7.9	2.5
☾	S	7	5:47	11:42	18:17	. . .
			6.3	2.0	8.0	. . .
	M	8	0:54	6:55	12:28	19:10
			2.0	5.9	2.6	8.2
	Tu	9	2:00	8:14	13:18	20:03
			1.3	5.5	3.1	8.4
	W	10	3:08	9:32	14:22	21:00
			0.7	5.6	3.7	8.7
	Th	11	4:14	10:42	15:33	21:54
			0.0	5.8	4.0	9.0
N	F	12	5:13	11:43	16:44	22:50
			−0.8	6.1	4.1	9.3
	S	13	6:06	12:36	17:50	23:44
			−1.4	6.6	3.9	9.5
● P	S	14	6:56	13:24	18:49	. . .
			−1.7	7.1	3.6	. . .
	M	15	0:37	7:44	14:09	19:45
			9.5	−1.8	7.5	3.2
	Tu	16	1:30	8:29	14:52	20:40
			9.4	−1.6	8.1	2.7
	W	17	2:22	9:14	15:37	21:36
			9.1	−1.1	8.4	2.3
	Th	18	3:16	9:59	16:17	22:31
			8.6	−0.5	8.6	2.0
E	F	19	4:12	10:44	17:00	23:27
			7.9	0.3	8.6	1.7
☽	S	20	5:14	11:29	17:48	. . .
			7.2	1.1	8.6	. . .
	S	21	0:30	6:22	12:25	18:40
			1.5	6.6	2.0	8.5
	M	22	1:40	7:41	13:22	19:34
			1.2	6.1	2.8	8.4
	Tu	23	2:50	9:04	14:25	20:30
			0.9	5.9	3.4	8.4
	W	24	3:56	10:21	15:31	21:26
			0.4	6.0	3.9	8.4
	Th	25	4:52	11:22	16:34	22:19
			0.0	6.1	4.1	8.4
S	F	26	5:40	12:11	17:30	23:05
			−0.3	6.3	4.2	8.4
	S	27	6:20	12:50	18:17	23:48
			−0.6	6.8	3.9	8.5
○ A	S	28	6:57	13:22	18:57	. . .
			−0.6	7.1	3.8	. . .
	M	29	0:27	7:30	13:50	19:32
			8.3	−0.6	7.3	3.6
	Tu	30	1:04	7:59	14:16	20:06
			8.3	−0.3	7.5	3.3
	W	31	1:39	8:24	14:43	20:38
			8.1	0.0	7.6	3.0

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:15	8:50	15:10	21:10
			7.9	0.3	7.9	2.6
E	F	2	2:52	9:16	15:37	21:40
			7.6	0.7	8.0	2.3
	S	3	3:35	9:44	16:10	22:24
			7.2	1.3	8.2	1.9
	S	4	4:22	10:20	16:49	23:17
			6.8	1.9	8.2	1.6
☾	M	5	5:19	10:57	17:31	. . .
			6.2	2.5	8.2	. . .
	Tu	6	0:18	6:30	11:38	18:28
			1.3	5.6	3.0	8.2
	W	7	1:28	7:54	12:33	19:24
			1.0	5.3	3.7	8.3
	Th	8	2:46	9:24	13:51	20:31
			0.6	5.5	4.3	8.5
N	F	9	3:58	10:36	15:25	21:38
			0.0	5.8	4.4	8.8
	S	10	4:58	11:32	16:44	22:40
			−0.6	6.2	4.1	9.0
	S	11	5:51	12:18	17:48	23:38
			−1.1	7.0	3.5	9.3
P ●	M	12	6:39	12:58	18:43	. . .
			−1.3	7.7	2.8	. . .
	Tu	13	0:31	7:22	13:38	19:34
			9.4	−1.3	3.3	2.2
	W	14	1:22	8:04	14:18	20:24
			9.3	−1.0	3.7	1.6
E	Th	15	2:12	8:44	14:57	21:10
			9.0	−0.4	3.9	1.2
	F	16	3:08	9:24	15:38	21:58
			8.4	0.3	9.0	1.0
	S	17	3:54	10:04	16:19	22:54
			7.8	1.0	3.8	1.0
	S	18	4:51	10:54	17:05	23:56
			7.0	1.9	3.7	1.0
☽	M	19	5:57	11:44	17:53	. . .
			6.2	2.7	3.4	. . .
	Tu	20	1:04	7:19	12:41	18:50
			1.0	5.7	3.5	3.1
	W	21	2:17	8:48	13:55	19:54
			0.9	5.7	4.1	7.9
S	Th	22	3:26	10:06	15:14	21:00
			0.6	6.1	4.2	7.8
	F	23	4:24	11:02	16:22	21:59
			0.3	6.5	4.0	7.9
	S	24	5:12	11:43	17:17	22:49
			0.1	6.9	3.7	8.0
A	S	25	5:52	12:15	18:00	23:33
			−0.1	7.2	3.4	8.1
	M	26	6:26	12:42	18:38	. . .
			−0.2	7.5	3.0	. . .
○	Tu	27	0:12	7:00	13:09	19:10
			8.2	0.0	7.7	2.7
	W	28	0:48	7:25	13:34	19:40
			8.2	0.2	8.0	2.2
E	Th	29	1:24	7:49	14:00	20:04
			8.1	0.5	8.2	1.8
	F	30	2:00	8:15	14:27	20:36
			8.1	0.9	8.4	1.4
	S	31	2:40	8:40	14:56	21:14
			7.8	1.4	8.4	1.1

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:20	9:14	15:28	21:57
			7.3	2.0	8.4	0.9
	M	2	4:08	9:46	16:04	22:48
			6.8	2.5	8.4	0.8
	Tu	3	5:02	10:21	16:50	23:49
			6.1	3.1	8.3	0.8
☾	W	4	6:17	11:06	17:45	. . .
			5.7	3.9	8.1	. . .
N	Th	5	1:06	7:55	12:16	18:54
			0.7	5.5	4.2	7.9
	F	6	2:27	9:26	14:04	20:16
			0.5	5.8	4.4	7.9
	S	7	3:40	10:25	15:41	21:30
			0.2	6.3	4.2	8.2
	S	8	4:40	11:10	16:50	22:37
			−0.2	7.1	3.4	8.6
P	M	9	5:30	11:50	17:48	23:32
			−0.5	7.7	2.5	8.9
●	Tu	10	6:14	12:26	18:32	. . .
			−0.5	8.2	1.7	. . .
E	W	11	0:24	6:54	13:02	19:18
			9.0	−0.3	8.7	1.0
	Th	12	1:12	7:32	13:39	19:57
			8.9	0.1	9.1	0.5
	F	13	1:58	8:09	14:16	20:42
			8.9	0.6	9.2	0.2
	S	14	2:44	8:51	14:52	21:30
			8.1	1.3	9.1	0.2
	S	15	3:34	9:31	15:32	22:23
			7.4	2.0	8.9	0.3
	M	16	4:26	10:12	16:16	23:19
			6.7	2.8	8.6	0.6
☽ S	Tu	17	5:31	11:00	17:05	. . .
			6.1	3.5	8.1	. . .
	W	18	0:23	6:54	12:04	18:04
			0.8	5.8	4.2	7.6
	Th	19	1:34	8:25	13:32	19:16
			1.0	5.7	4.4	7.4
	F	20	2:42	9:36	15:01	20:30
			1.0	6.3	4.2	7.2
A	S	21	3:42	10:24	16:06	21:34
			0.8	6.8	3.8	7.2
	S	22	4:31	11:00	16:55	22:26
			0.7	7.2	3.3	7.5
	M	23	5:10	11:29	17:35	23:10
			0.6	7.6	2.7	7.8
	Tu	24	5:46	11:54	18:08	23:51
			0.7	7.9	2.2	7.9
	W	25	6:16	12:22	18:33	. . .
			0.8	8.2	1.6	. . .
E ○	Th	26	0:30	6:44	12:48	19:04
			8.0	1.0	8.4	1.1
	F	27	1:07	7:12	13:16	19:37
			8.1	1.3	8.5	0.6
	S	28	1:45	7:46	13:44	20:18
			8.0	1.7	8.7	0.3
	S	29	2:26	8:15	14:18	20:52
			7.6	2.2	8.8	0.4
	M	30	3:10	8:46	14:52	21:38
			7.0	2.7	8.7	0.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	3:59	9:21	15:30	22:31
			6.7	3.3	8.5	0.1
N	W	2	4:58	10:04	16:20	23:34
			6.2	3.8	8.2	0.3
☾	Th	3	6:17	11:08	17:22	. . .
			5.9	4.4	7.8	. . .
	F	4	0:48	7:52	12:45	18:42
			0.5	5.9	4.5	7.5
	S	5	2:06	9:06	14:34	20:12
			0.6	6.3	4.1	7.5
	S	6	3:16	9:59	15:49	21:29
			0.6	7.1	3.4	7.7
P	M	7	4:14	10:39	16:46	22:32
			0.6	7.7	2.4	8.1
	Tu	8	5:02	11:16	17:29	23:26
			0.6	8.3	1.4	8.3
E	W	9	5:45	11:51	18:14	. . .
			0.7	8.7	0.6	. . .
●	Th	10	0:15	6:24	12:27	18:57
			8.5	0.9	9.1	0.0
	F	11	1:01	7:08	13:02	19:41
			8.4	1.3	9.3	−0.4
	S	12	1:47	7:42	13:38	20:24
			8.0	1.8	9.4	−0.5
	S	13	2:31	8:18	14:14	21:08
			7.5	2.4	9.2	−0.4
	M	14	3:16	8:56	14:50	21:54
			6.9	2.9	8.9	−0.2
S	Tu	15	4:08	9:34	15:34	22:44
			6.3	3.5	8.4	0.3
	W	16	5:09	10:24	16:20	23:39
			6.0	4.1	7.8	0.6
☽	Th	17	6:20	11:34	17:17	. . .
			5.8	4.4	7.2	. . .
	F	18	0:38	7:39	13:05	18:29
			1.0	6.3	4.4	6.7
A	S	19	1:42	8:40	14:28	19:47
			1.2	6.6	4.1	6.5
	S	20	2:41	9:24	15:32	20:57
			1.4	6.9	3.6	6.7
	M	21	3:32	10:00	16:21	21:54
			1.5	7.3	2.8	6.9
	Tu	22	4:15	10:33	16:52	22:48
			1.5	7.8	2.1	7.2
E	W	23	4:52	11:04	17:28	23:27
			1.5	8.1	1.5	7.6
	Th	24	5:32	11:35	18:02	. . .
			1.6	8.5	0.7	. . .
○	F	25	0:09	6:09	12:05	18:40
			7.7	1.9	8.8	0.0
	S	26	0:50	6:41	12:36	19:16
			7.8	2.2	9.0	−0.4
	S	27	1:34	7:14	13:10	19:56
			7.7	2.6	9.2	−0.8
	M	28	2:19	7:48	13:46	20:40
			7.4	3.0	9.2	−0.9
	Tu	29	3:07	8:27	14:26	21:28
			7.1	3.5	9.0	−0.8
N	W	30	4:00	9:14	15:11	22:24
			6.5	3.9	8.6	−0.4
	Th	31	5:00	10:14	16:06	23:23
			6.6	4.2	8.1	−0.1
NOVEMBER.						
☾	F	1	6:10	11:35	17:14	. . .
			6.6	4.3	7.5	. . .
	S	2	0:30	7:21	13:08	18:38
			0.4	6.8	4.0	7.1
P	S	3	1:37	8:25	14:32	20:07
			0.8	7.2	3.3	7.0
	M	4	2:44	9:12	15:34	21:22
			1.1	7.7	2.3	7.3
E	Tu	5	3:40	9:58	16:28	22:25
			1.3	8.2	1.5	7.5
	W	6	4:31	10:40	17:17	23:19
			1.5	8.6	0.7	7.7
	Th	7	5:20	11:19	18:04	. . .
			1.8	9.1	−0.1	. . .
●	F	8	0:09	6:01	11:54	18:47
			7.6	2.1	9.3	−0.6
	S	9	0:55	6:40	12:30	19:27
			7.6	2.5	9.4	−0.9
	S	10	1:38	7:15	13:06	20:09
			7.4	2.9	9.4	−0.9
	M	11	2:22	7:51	13:43	20:48
			7.1	3.3	9.2	−0.8
S	Tu	12	3:07	8:30	14:20	21:28
			6.8	3.6	8.7	−0.4
	W	13	3:53	9:11	15:00	22:10
			6.7	4.0	8.2	0.0
	Th	14	4:43	10:02	15:43	22:53
			6.6	4.2	7.6	0.4
	F	15	5:32	11:08	16:34	23:40
			6.6	4.3	7.0	0.9
A	S	16	6:24	12:20	17:37	. . .
☽			6.7	4.2	6.5	. . .
	S	17	0:30	7:15	13:37	18:50
			1.3	6.9	3.8	6.2
	M	18	1:22	8:02	14:28	20:05
			1.7	7.2	3.2	6.1
E	Tu	19	2:15	8:44	15:22	21:10
			2.0	7.5	2.5	6.4
	W	20	3:12	9:27	16:10	22:08
			2.2	7.9	1.7	6.7
	Th	21	4:02	10:11	16:58	23:00
			2.4	8.3	0.8	7.0
	F	22	4:44	10:47	17:35	23:50
			2.7	8.7	0.0	7.2
	S	23	5:25	11:25	18:17	. . .
			2.9	9.1	−0.7	. . .
○	S	24	0:39	6:05	12:04	19:00
			7.3	3.1	9.3	−1.2
	M	25	1:27	6:48	12:45	19:44
			7.6	3.3	9.5	−1.5
N	Tu	26	2:13	7:33	13:28	20:30
			7.1	3.4	9.4	−1.5
	W	27	3:04	8:22	14:13	21:20
			7.0	3.6	9.2	−1.3
P	Th	28	3:55	9:18	15:04	22:11
			7.1	3.7	8.7	−0.8
	F	29	4:48	10:25	16:02	23:05
			7.3	3.8	8.1	−0.3
	S	30	5:43	11:40	17:10	. . .
			7.4	3.6	7.4	. . .
DECEMBER.						
☾	S	1	0:02	6:43	13:00	18:28
			0.4	7.6	3.1	6.9
E	M	2	1:00	7:36	14:07	19:52
			1.0	7.9	2.4	6.7
	Tu	3	2:02	8:27	15:14	21:08
			1.6	8.1	1.7	6.8
	W	4	3:07	9:15	16:13	22:15
			2.1	8.5	0.8	6.9
	Th	5	4:08	10:05	17:07	23:15
			2.5	8.8	0.0	7.0
	F	6	4:58	10:47	17:58	. . .
			2.9	9.1	−0.6	. . .
	S	7	0:08	5:37	11:27	18:37
			7.0	3.2	9.2	−1.0
●	S	8	0:55	6:20	12:07	19:17
			6.9	3.4	9.3	−1.1
S	M	9	1:38	7:00	12:45	19:56
			6.8	3.6	9.2	−1.1
	Tu	10	2:18	7:40	13:21	20:31
			6.8	3.8	8.9	−0.9
	W	11	2:57	8:18	13:58	21:06
			6.9	3.9	8.6	−0.6
	Th	12	3:35	8:58	14:36	21:40
			7.0	4.0	8.1	−0.1
A	F	13	4:12	9:43	15:17	22:13
			7.0	4.0	7.6	0.3
	S	14	4:47	10:33	16:02	22:47
			7.1	3.9	7.1	0.7
	S	15	5:24	11:27	16:54	23:23
			7.2	3.7	6.6	1.2
☽	M	16	6:05	12:20	17:55	. . .
			7.4	3.3	6.2	. . .
E	Tu	17	0:10	6:49	13:20	19:08
			1.8	7.6	2.8	5.9
	W	18	1:04	7:36	14:23	20:22
			2.4	7.8	2.1	5.8
	Th	19	1:58	8:31	15:24	21:34
			2.8	8.1	1.3	6.0
	F	20	2:58	9:18	16:20	22:38
			3.2	8.4	0.5	6.3
	S	21	3:50	10:05	17:12	23:35
			3.5	8.8	−0.4	6.6
	S	22	4:47	10:52	18:00	. . .
			3.6	9.2	−1.1	. . .
N	M	23	0:28	5:42	11:40	18:47
○			6.7	3.9	9.4	−1.6
	Tu	24	1:17	6:35	12:27	19:34
			7.0	3.7	9.5	−1.8
P	W	25	2:04	7:28	13:16	20:20
			7.3	3.5	9.5	−1.8
	Th	26	2:52	8:20	14:07	21:06
			7.5	3.3	9.3	−1.5
	F	27	3:37	9:18	14:59	21:52
			7.8	3.1	8.8	−1.0
	S	28	4:22	10:18	15:55	22:40
			8.0	2.8	8.2	−0.2
E	S	29	5:06	11:20	16:58	23:28
			8.2	2.5	7.5	0.6
☾	M	30	5:55	12:24	18:10	. . .
			8.3	2.1	6.8	. . .
	Tu	31	0:22	6:48	13:36	19:30
			1.4	8.3	1.7	6.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Waters, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:22 9.7	6:14 9.1	11:18 11.2	19:40 0.4
	Tu	2	4:10 10.7	7:20 9.8	11:52 11.3	20:25 −0.4
N	W	3	4:54 11.4	8:20 10.2	12:40 11.3	21:10 −1.2
○ P	Th	4	5:34 11.8	9:22 10.1	13:38 11.4	21:57 −1.4
	F	5	6:13 12.1	10:23 9.9	14:45 11.2	22:44 −1.2
	S	6	6:50 12.1	11:25 9.4	15:57 10.6	23:30 −0.5
	S	7	7:27 12.1	12:35 8.7	17:04 9.9	. . . . .
	M	8	0:15 0.6	8:03 12.0	13:58 7.8	18:20 9.1
E	Tu	9	1:00 2.0	8:37 11.8	15:13 6.6	19:42 8.2
☾	W	10	1:42 3.6	9:10 11.6	16:22 5.4	21:20 7.6
	Th	11	2:27 5.2	9:40 11.3	17:18 4.3	23:28 7.7
	F	12	3:16 6.7	10:12 11.0	18:08 8.3	. . . . .
	S	13	1:34 8.4	4:16 8.0	10:42 10.6	18:50 2.5
	S	14	2:50 9.3	5:35 9.0	11:12 10.3	19:28 2.0
	M	15	3:42 10.1	7:00 9.5	11:43 10.1	20:05 1.6
	Tu	16	4:22 10.6	8:22 9.7	12:20 9.9	20:40 1.3
S A	W	17	4:57 10.9	9:16 9.7	13:00 9.9	21:13 1.1
	Th	18	5:28 11.1	9:48 9.6	13:55 9.9	21:45 1.0
●	F	19	5:57 11.1	10:20 9.4	14:30 9.9	22:18 0.9
	S	20	6:24 11.2	10:58 9.0	15:18 9.7	22:50 1.1
	S	21	6:48 11.2	11:38 8.6	16:08 9.5	23:24 1.5
	M	22	7:12 11.2	12:23 8.0	16:57 9.1	23:54 2.1
	Tu	23	7:35 11.1	13:10 7.3	17:57 8.6	. . . . .
E	W	24	0:30 3.0	7:56 11.0	13:58 6.4	19:06 8.1
	Th	25	1:04 4.1	8:17 10.9	14:50 5.4	20:27 7.8
	F	26	1:38 5.4	8:35 10.9	15:42 4.3	22:08 7.7
☽	S	27	2:18 6.7	8:52 10.8	16:34 3.1	. . . . .
	S	28	0:35 8.2	3:10 8.0	9:10 10.9	17:28 2.1
	M	29	2:28 9.2	4:28 9.1	9:30 11.0	18:24 1.1
	Tu	30	3:23 10.2	5:54 9.9	10:12 11.1	19:17 0.3
N	W	31	4:00 10.9	7:13 10.1	11:13 11.1	20:09 −0.4

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	4:35 11.4	8:22 10.0	12:40 11.0	20:58 −0.6
○	F	2	5:10 11.7	9:24 9.5	14:00 10.9	21:45 −0.5
	S	3	5:40 11.8	10:22 8.8	15:17 10.7	22:30 0.0
	S	4	6:10 11.8	11:16 7.9	16:25 10.8	23:12 1.0
	M	5	6:40 11.8	12:12 6.9	17:33 9.7	23:54 2.2
E	Tu	6	7:08 11.6	13:07 5.8	18:40 9.2	. . . . .
	W	7	0:33 3.6	7:36 11.4	14:04 4.9	19:54 8.7
	Th	8	1:13 5.1	8:04 11.1	15:00 4.1	21:22 8.4
☾	F	9	1:55 6.5	8:32 10.8	16:00 3.5	23:12 8.4
	S	10	2:48 7.8	9:00 10.3	16:57 3.1	. . . . .
	S	11	1:12 9.0	3:48 8.7	9:30 10.0	17:54 2.7
	M	12	2:30 9.6	5:30 9.3	9:57 9.7	18:48 2.4
S	Tu	13	3:17 10.1	9:35 9.5	10:45 9.5	19:36 2.2
A	W	14	3:55 10.5	10:15 9.4	11:54 9.5	20:17 2.0
	Th	15	4:25 10.6	10:10 9.2	13:08 9.5	20:52 1.8
	F	16	4:54 10.7	9:52 8.9	14:04 9.6	21:24 1.8
●	S	17	5:18 10.8	10:00 8.4	14:57 9.6	21:55 1.9
	S	18	5:37 10.8	10:33 7.8	15:50 9.5	22:27 2.2
	M	19	5:57 10.8	11:08 7.0	16:37 9.4	22:57 2.8
E	Tu	20	6:13 10.8	11:45 6.2	17:30 9.2	23:27 3.6
	W	21	6:32 10.8	12:25 5.3	18:26 9.0	. . . . .
	Th	22	0:04 4.6	6:48 10.7	13:07 4.4	19:28 8.8
	F	23	0:38 5.7	7:08 10.7	13:58 3.6	20:43 8.7
	S	24	1:17 6.9	7:22 10.6	14:48 2.8	22:17 8.7
☽	S	25	2:00 8.0	7:40 10.7	15:46 2.2	. . . . .
	M	26	0:30 9.2	3:00 9.0	7:57 10.7	16:50 1.7
N	Tu	27	2:05 9.9	4:32 9.7	8:32 10.6	17:55 1.2
	W	28	2:52 10.6	6:03 10.0	9:33 10.6	18:55 0.8
	Th	29	3:28 11.0	7:35 9.6	11:35 10.2	19:52 0.7

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:00 11.2	8:35 8.9	13:18 10.1	20:40 0.8
	S	2	4:26 11.3	9:24 7.9	14:37 10.2	21:28 1.3
○	S	3	4:58 11.3	10:10 6.8	15:47 10.2	22:10 2.1
E	M	4	5:20 11.3	10:55 5.7	16:52 10.1	22:50 3.2
	Tu	5	5:43 11.2	11:40 4.6	17:59 9.9	23:30 4.4
	W	6	6:08 11.0	12:28 3.8	18:55 9.7	. . . . .
	Th	7	0:10 5.6	6:33 10.7	13:08 3.3	20:00 9.5
	F	8	0:50 6.8	7:00 10.4	13:55 3.0	21:15 9.3
	S	9	1:35 7.8	7:25 10.0	14:46 2.9	22:43 9.3
☾	S	10	2:30 8.6	7:52 9.7	15:45 3.0	. . . . .
S	M	11	0:25 9.5	3:56 9.1	8:00 9.4	16:50 3.0
A	Tu	12	1:38 9.9	17:53 3.0	. . . . .	
	W	13	2:28 10.1	18:52 2.9	. . . . .	
	Th	14	3:05 10.3	9:32 8.6	12:00 8.9	19:35 2.9
	F	15	3:34 10.4	9:12 8.2	13:17 9.0	20:14 2.9
	S	16	3:57 10.4	9:10 7.6	14:18 9.2	20:48 3.1
	S	17	4:15 10.4	9:30 6.8	15:15 9.3	21:22 3.5
●	M	18	4:32 10.4	10:00 5.9	16:05 9.5	21:54 4.0
E	Tu	19	4:48 10.4	10:33 4.9	16:57 9.6	22:28 4.7
	W	20	5:03 10.4	11:07 3.9	17:48 9.7	23:04 5.6
	Th	21	5:20 10.4	11:47 3.0	18:44 9.8	23:43 6.5
	F	22	5:38 10.5	12:28 2.3	19:46 9.9	. . . . .
	S	23	0:24 7.5	5:54 10.5	13:14 1.8	20:56 9.9
	S	24	1:10 8.4	6:10 10.5	14:07 1.5	22:28 9.9
N ☽	M	25	2:08 9.2	6:27 10.4	15:09 1.5	. . . . .
	Tu	26	0:00 10.2	3:30 9.7	6:52 10.2	16:18 1.5
	W	27	1:15 10.6	5:28 9.6	7:50 9.8	17:25 1.7
P	Th	28	2:00 10.8	7:18 9.0	10:22 9.3	18:30 1.9
	F	29	2:33 11.0	8:02 8.1	12:25 9.2	19:26 2.3
	S	30	3:03 11.0	8:40 6.9	13:57 9.3	20:16 3.0
	S	31	3:28 11.0	9:15 5.7	15:10 9.7	21:00 3.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from 2 feet below Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 7.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
			APRIL.			
E ○	M	1	3:50 11.0	9:52 4.5	16:15 10.0	21:44 4.8
	Tu	2	4:15 10.9	10:28 3.5	17:14 10.3	22:24 5.8
	W	3	4:40 10.8	11:04 2.7	18:09 10.5	23:06 6.8
	Th	4	5:08 10.5	11:40 2.2	19:02 10.5	23:50 7.6
	F	5	5:28 10.2	12:22 2.0	20:00 10.5	. . . . . .
	S	6	0:37 8.3	5:50 9.8	13:08 2.1	21:00 10.4
S	S	7	1:33 8.8	6:06 9.5	13:50 2.4	22:12 10.2
	M	8	2:45 9.1	5:05 9.2	14:46 2.7	23:28 10.2
☾ A	Tu	9	15:50 3.1	. . . . .	. . . . .	. . . . .
	W	10	0:34 10.3	16:50 3.4	. . . . .	. . . . .
	Th	11	1:20 10.3	8:45 8.2	10:04 8.3	17:48 3.7
	F	12	1:55 10.4	8:25 7.7	11:57 8.2	18:38 4.0
	S	13	2:20 10.4	8:20 6.9	13:28 8.5	19:20 4.4
	S	14	2:40 10.4	8:30 6.0	14:30 8.8	20:00 4.9
E	M	15	2:55 10.3	8:57 4.9	15:27 9.3	20:38 5.5
	Tu	16	3:12 10.4	9:24 3.7	16:20 9.8	21:18 6.3
●	W	17	3:27 10.4	9:57 2.7	17:12 10.2	21:57 7.0
	Th	18	3:43 10.5	10:34 1.7	18:05 10.6	22:40 7.8
	F	19	4:00 10.6	11:14 1.0	19:00 10.9	23:24 8.5
	S	20	4:18 10.6	11:57 0.6	20:00 11.0	. . . . . .
N	S	21	0:15 9.2	4:35 10.6	12:47 0.5	21:05 11.0
P	M	22	1:15 9.6	4:52 10.5	13:42 0.7	22:16 11.1
	Tu	23	2:42 9.8	5:05 10.1	14:43 1.2	23:23 11.1
☽	W	24	15:50 1.8	. . . . .	. . . . .	. . . . .
	Th	25	0:15 11.2	7:15 8.5	9:08 8.6	16:52 2.6
	F	26	0:56 11.2	7:30 7.4	11:18 8.3	17:55 3.4
	S	27	1:28 11.2	7:55 6.1	13:10 8.5	18:52 4.4
E	S	28	1:56 11.1	8:25 4.8	14:38 9.0	19:42 5.4
	M	29	2:22 11.0	8:57 3.5	15:40 9.7	20:30 6.4
	Tu	30	2:46 10.8	9:28 2.5	16:38 10.3	21:15 7.3

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
			MAY.			
○	W	1	3:08 10.6	9:58 1.8	17:32 10.7	22:00 8.0
	Th	2	3:30 10.4	10:32 1.3	18:18 11.0	22:46 8.6
	F	3	3:52 10.1	11:07 1.1	19:06 11.1	23:35 9.0
	S	4	4:10 9.9	11:45 1.2	19:55 11.1	. . . . . .
S	S	5	0:30 9.3	4:05 9.6	12:26 1.5	20:47 11.0
	M	6	1:48 9.4	3:00 9.5	13:10 1.9	21:42 10.9
A	Tu	7	14:00 2.4	22:36 10.8	. . . . .	. . . . .
	W	8	14:58 3.0	23:24 10.8	. . . . .	. . . . .
☾	Th	9	15:48 3.6	. . . . .	. . . . .	. . . . .
	F	10	0:02 10.7	7:34 7.4	10:00 7.6	16:42 4.2
	S	11	0:30 10.6	7:24 6.5	11:55 7.6	17:32 5.0
E	S	12	0:52 10.6	7:30 5.5	13:28 8.0	18:22 5.7
	M	13	1:10 10.5	7:52 4.3	14:42 8.7	19:10 6.6
	Tu	14	1:25 10.5	8:20 3.0	15:40 9.5	19:54 7.4
	W	15	1:40 10.6	8:50 1.8	16:34 10.2	20:42 8.2
●	Th	16	2:00 10.8	9:30 0.7	17:24 10.8	21:30 8.9
	F	17	2:17 10.9	10:06 —0.1	18:16 11.3	22:18 9.4
	S	18	2:37 11.0	10:52 —0.5	19:08 11.6	23:12 9.8
N P	S	19	3:02 11.0	11:40 —0.6	20:00 11.8	. . . . . .
	M	20	0:14 10.1	3:30 10.7	12:30 —0.3	20:56 11.8
	Tu	21	1:40 10.0	3:50 10.2	13:28 0.3	21:48 11.7
	W	22	14:18 1.3	22:35 11.7	. . . . .	. . . . .
☽	Th	23	6:08 8.3	7:55 8.4	15:18 2.5	23:16 11.6
	F	24	6:27 6.9	10:00 7.8	16:18 3.8	23:52 11.5
E	S	25	7:00 5.5	12:04 7.8	17:15 5.1	. . . . . .
	S	26	0:22 11.4	7:30 4.1	13:48 8.4	18:13 6.3
	M	27	0:50 11.2	8:02 2.9	15:04 9.3	19:05 7.5
	Tu	28	1:14 11.0	8:32 2.0	16:04 10.0	19:56 8.4
	W	29	1:38 10.7	9:08 1.3	16:54 10.7	20:51 9.0
○	Th	30	2:00 10.5	9:32 0.9	17:38 11.1	21:43 9.4
	F	31	2:19 10.3	10:07 0.7	18:21 11.3	22:34 9.6

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
			JUNE.			
S	S	1	2:24 10.1	10:41 0.7	19:01 11.4	23:24 9.7
	S	2	1:50 9.9	11:19 0.8	19:44 11.4	. . . . . .
	M	3	0:26 9.7	1:40 9.7	12:00 1.1	20:25 11.4
A	Tu	4	12:41 1.6	21:06 11.3	. . . . .	. . . . .
	W	5	13:25 2.2	21:44 11.2	. . . . .	. . . . .
	Th	6	14:08 2.9	22:16 11.1	. . . . .	. . . . .
☾	F	7	6:40 7.5	8:00 7.5	14:52 3.8	22:43 11.0
	S	8	6:12 6.5	9:57 7.2	15:39 4.9	23:06 10.9
E	S	9	9:20 5.4	11:58 7.2	16:30 6.0	23:25 10.9
	M	10	6:41 4.1	13:39 8.0	17:28 7.0	23:42 10.9
	Tu	11	7:10 2.8	14:52 9.0	18:18 8.0	. . . . . .
	W	12	0:00 11.0	7:44 1.5	15:51 9.9	19:14 8.9
	Th	13	0:19 11.1	8:23 0.4	16:41 10.7	20:07 9.5
●	F	14	0:41 11.3	9:04 —0.5	17:29 11.3	21:00 10.0
N	S	15	1:10 11.5	9:48 —1.0	18:14 11.3	22:00 10.2
P	S	16	1:58 11.4	10:34 —1.2	19:00 12.0	23:00 10.3
	M	17	2:43 11.1	11:24 —1.0	19:44 12.1	. . . . . .
	Tu	18	0:13 10.0	3:45 10.5	12:12 —0.3	20:25 12.1
	W	19	1:58 9.3	5:15 9.7	13:02 0.8	21:05 12.0
	Th	20	3:45 8.2	6:55 8.8	13:58 2.1	21:43 11.9
☽ E	F	21	4:49 6.8	8:36 7.9	14:48 3.6	22:17 11.7
	S	22	5:36 5.4	10:31 7.6	15:40 5.2	22:48 11.5
	S	23	6:21 4.0	12:37 8.0	16:35 6.7	23:20 11.3
	M	24	7:00 2.8	14:13 8.9	17:35 8.0	23:46 11.0
	Tu	25	7:34 1.9	15:18 9.7	18:39 8.9	. . . . . .
	W	26	0:13 10.8	8:06 1.4	16:10 10.4	19:45 9.5
	Th	27	0:39 10.5	8:40 1.0	16:54 10.9	20:38 9.8
S	F	28	1:02 10.3	9:13 0.8	17:33 11.2	21:31 9.9
○	S	29	1:20 10.2	9:47 0.7	18:11 11.3	22:18 9.9
	S	30	1:04 10.0	10:23 0.8	18:43 11.4	23:05 9.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from 2 feet below Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 7.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
A	M	1	1:21	11:00	19:18	. . .			Th	1	0:04	5:00	11:41	19:15			S	1	0:40	7:18	12:18	18:37	
			9.9	1.0	11.4	. . .					7.8	9.1	2.7	11.0					4.3	8.9	6.2	10.4	
	Tu	2	0:00	2:00	11:35	19:49		E	F	2	0:53	6:00	12:12	19:36			M	2	1:28	8:30	12:57	18:53	
			9.5	9.6	1.3	11.3					7.1	8.6	3.5	10.9					3.6	8.8	7.3	10.4	
	W	3	1:05	2:50	12:12	20:18			S	3	1:39	7:05	12:49	19:57			Tu	3	2:18	10:00	13:43	19:05	
			9.1	9.2	1.8	11.3					6.2	8.2	4.6	10.8					3.0	8.9	8.3	10.4	
	Th	4	2:28	5:10	12:47	20:45			S	4	2:30	8:20	13:25	20:15		☾	W	4	3:18	12:00	14:45	19:25	
			8.5	8.6	2.5	11.2					5.3	8.0	5.7	10.7					2.5	9.4	9.1	10.5	
	F	5	3:24	6:50	13:25	21:10		☾	M	5	3:20	9:58	14:05	20:33		N	Th	5	4:28	13:30	16:16	20:00	
			7.7	8.0	3.5	11.1					4.4	7.9	7.0	10.7					2.0	10.0	9.7	10.4	
E	S	6	4:00	8:15	14:05	21:30			Tu	6	4:10	12:00	14:54	20:51			F	6	5:24	14:18	17:50	21:15	
			6.7	7.5	4.6	11.0					3.4	8.4	8.1	10.8					1.5	10.5	9.8	10.3	
☾	S	7	4:35	9:57	14:45	21:49			W	7	5:08	13:55	16:11	21:15			S	7	6:25	14:54	19:05	23:10	
			5.5	7.3	5.8	11.0					2.4	9.2	9.1	10.9					1.1	10.9	9.4	10.1	
	M	8	5:12	11:58	15:36	22:08			Th	8	5:56	14:58	17:25	21:55			S	8	7:20	15:23	20:00	. . .	
			4.3	7.6	7.0	11.0					1.5	10.0	9.7	11.0					0.9	11.1	8.7	. . .	
	Tu	9	5:52	13:51	16:34	22:30		N	F	9	6:48	15:35	18:40	22:51		P	M	9	0:48	8:10	15:52	20:50	
			3.1	8.5	8.1	11.0					0.7	10.7	10.0	11.1					10.2	1.1	11.2	7.7	
	W	10	6:32	15:08	17:41	22:48			S	10	7:40	16:10	19:47	. . .		●	Tu	10	2:10	8:57	16:18	21:34	
			1.9	9.5	9.1	11.2					0.1	11.1	9.9	. . .					10.3	1.6	11.2	6.5	
	Th	11	7:15	15:53	18:44	23:15			S	11	0:05	8:30	16:41	20:44		E	W	11	3:20	9:40	16:43	22:20	
			0.8	10.3	9.8	11.4					11.1	—0.3	11.4	9.4					10.3	2.4	11.2	5.3	
N	F	12	8:00	16:35	19:46	. . .		P	M	12	1:30	9:17	17:12	21:45			Th	12	4:28	10:22	17:08	23:05	
			—0.1	11.0	10.1	. . .		●			11.0	—0.2	11.5	8.7					10.3	3.5	11.1	4.2	
	S	13	0:00	8:45	17:15	20:45			Tu	13	2:46	10:08	17:48	22:36			F	13	5:32	11:04	17:34	23:50	
			11.5	—0.8	11.5	10.2					10.8	0.3	11.5	7.7					10.2	4.8	11.0	3.3	
●	S	14	1:00	9:32	17:55	21:46			W	14	4:00	10:46	18:10	23:32			S	14	6:35	11:45	18:00	. . .	
P			11.5	—1.1	11.8	10.0					10.5	1.2	11.5	6.7					10.1	6.0	10.7	. . .	
	M	15	2:10	10:20	18:29	22:50		E	Th	15	5:10	11:29	18:37	. . .			S	15	0:37	7:44	12:32	18:30	
			11.3	—1.0	11.9	9.5					10.1	2.4	11.4	. . .					2.8	9.9	7.2	10.4	
	Tu	16	3:25	11:06	19:08	. . .			F	16	0:30	6:23	12:12	19:10			M	16	1:28	9:00	13:22	18:55	
			10.9	—0.4	11.9	. . .					5.6	9.5	3.9	11.2					2.6	9.8	8.2	9.9	
	W	17	0:00	4:45	11:58	19:41			S	17	1:28	7:36	12:54	19:42		☽	Tu	17	2:22	10:28	14:37	19:20	
			8.8	10.2	0.6	11.9					4.7	9.1	5.4	11.0					2.6	9.8	8.9	9.5	
	Th	18	1:13	5:58	12:39	20:11			S	18	2:28	9:04	13:43	20:07		S	W	18	3:25	12:00	19:17	19:40	
			7.8	9.4	2.0	11.8					3.9	8.9	6.8	10.7					2.8	10.0	9.1	9.1	
E	F	19	2:30	7:24	13:24	20:42		☽	M	19	3:30	10:48	14:45	20:42			Th	19	4:32	13:10	. . .	. . .	
			6.6	8.7	3.6	11.6					3.3	8.9	8.0	10.2					3.0	10.3	. . .	. . .	
☽	S	20	3:38	8:57	14:13	21:14			Tu	20	4:31	12:37	16:00	21:17			F	20	5:40	13:57	20:45	22:45	
			5.3	8.1	5.2	11.4					2.9	9.3	8.9	9.9					3.1	10.6	8.4	8.6	
	S	21	4:39	10:53	15:02	21:44			W	21	5:31	13:53	18:23	22:08		A	S	21	6:35	14:33	20:55	. . .	
			4.1	8.0	6.7	11.1					2.6	9.9	9.3	9.6					3.1	10.6	8.1	. . .	
	M	22	5:31	12:51	16:05	22:17		S	Th	22	6:26	14:42	20:29	23:03			S	22	0:15	7:22	15:03	21:00	
			3.1	8.6	8.0	10.8					2.4	10.4	9.2	9.4					8.7	3.2	10.6	7.6	
	Tu	23	6:19	14:12	17:19	22:51			F	23	7:15	15:24	21:12	. . .			M	23	1:25	8:00	15:27	21:03	
			2.4	9.5	8.9	10.5					2.2	10.6	9.0	. . .					8.9	3.3	10.6	7.0	
	W	24	7:08	15:14	18:46	23:26			S	24	0:12	8:00	16:00	21:24			Tu	24	2:20	8:30	15:45	21:18	
			1.9	10.1	9.5	10.2					9.4	2.2	10.8	8.9					9.1	3.6	10.5	6.2	
	Th	25	7:45	15:57	20:01	. . .		A	S	25	1:12	8:35	16:25	21:25			W	25	3:10	9:02	16:00	21:45	
			1.6	10.6	9.7	. . .					9.4	2.1	10.8	8.5					9.3	4.0	10.5	5.3	
S	F	26	0:05	8:20	16:34	21:00			M	26	2:04	9:05	16:48	21:44		E	Th	26	4:00	9:34	16:18	22:13	
			10.0	1.5	10.9	9.7					9.5	2.2	10.8	8.0		○			9.5	4.6	10.4	4.4	
	S	27	0:55	8:55	17:10	21:32		○	Tu	27	2:52	9:35	17:10	22:13			F	27	4:48	10:07	16:30	22:45	
			9.9	1.3	11.0	9.5					9.6	2.4	10.7	7.4					9.7	5.4	10.4	3.5	
○	S	28	1:42	9:29	17:40	22:05			W	28	3:43	10:05	17:30	22:45			S	28	5:38	10:40	16:46	23:20	
A			9.9	1.3	11.1	9.3					9.5	2.9	10.7	6.6					9.8	6.2	10.4	2.8	
	M	29	2:28	10:03	18:05	22:40		E	Th	29	4:30	10:36	17:46	23:23			S	29	6:30	11:18	17:00	. . .	
			9.8	1.3	11.1	8.9					9.4	3.4	10.6	5.8					9.9	7.0	10.4	. . .	
	Tu	30	3:16	10:34	18:31	23:21			F	30	5:20	11:09	18:05	. . .			M	30	0:00	7:28	11:58	17:10	
			9.7	1.6	11.1	8.4					9.3	4.2	10.6	. . .					2.2	9.9	7.9	10.4	
	W	31	4:04	11:07	18:55	. . .			S	31	0:00	6:19	11:44	18:22									
			9.4	2.0	11.0	. . .					5.0	9.1	5.1	10.5									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from 2 feet below Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 7.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th meridian W.; 0^h is midnight, 12^h is noon: all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	0:45	8:38	12:40	17:17
			1.8	9.9	8.7	10.4
N	W	2	1:35	10:00	13:40	17:32
			1.7	10.0	9.4	10.4
☾	Th	3	2:36	11:38	15:10	17:44
			1.7	10.3	9.9	10.2
	F	4	3:44	12:47	. . . . .	
			1.7	10.7	. . . . .	
	S	5	4:52	13:28	19:38	21:38
			1.8	10.9	9.0	9.1
	S	6	5:56	14:00	19:40	23:52
			2.0	11.1	8.0	9.0
P	M	7	6:53	14:28	20:10	. . .
			2.5	11.2	6.8	. . .
	Tu	8	1:30	7:45	14:52	20:45
			9.3	3.1	11.2	5.3
E	W	9	2:46	8:32	15:18	21:22
			9.7	4.0	11.1	4.0
●	Th	10	3:52	9:15	15:40	22:00
			10.2	5.0	11.0	2.9
	F	11	4:52	9:57	16:02	22:36
			10.5	6.1	10.9	2.0
	S	12	5:48	10:40	16:28	23:15
			10.7	7.1	10.7	1.5
	S	13	6:45	11:25	16:52	23:56
			10.8	7.9	10.3	1.4
	M	14	7:43	12:15	17:12	. . .
			10.8	8.6	10.0	. . .
S	Tu	15	0:40	8:47	13:17	17:17
			1.6	10.6	9.1	9.5
	W	16	1:27	10:00	. . . . .	
			2.1	10.5	. . . . .	
☽	Th	17	2:22	11:13	. . . . .	
			2.6	10.5	. . . . .	
	F	18	3:30	12:14	. . . . .	
			3.1	10.6	. . . . .	
A	S	19	4:35	12:57	20:28	22:25
			3.5	10.6	7.7	7.8
	S	20	5:10	13:30	20:22	. . .
			3.9	10.6	7.0	. . .
	M	21	0:17	6:25	13:57	20:24
			8.0	4.3	10.6	6.3
	Tu	22	1:35	7:08	14:16	20:30
			8.3	4.8	10.5	5.4
E	W	23	2:34	7:45	14:30	20:47
			8.8	5.3	10.5	4.4
	Th	24	3:26	8:26	14:45	21:12
			9.3	6.0	10.5	3.3
○	F	25	4:15	9:00	14:57	21:40
			9.8	6.7	10.5	2.3
	S	26	5:00	9:35	15:15	22:14
			10.2	7.4	10.6	1.4
	S	27	5:50	10:15	15:25	22:50
			10.6	8.0	10.6	0.8
	M	28	6:40	10:57	15:37	23:30
			10.8	8.7	10.7	0.4
	Tu	29	7:37	11:42	15:50	. . .
			10.9	9.3	10.8	. . .
N	W	30	0:18	8:40	12:37	16:03
			0.4	11.0	9.8	10.6
	Th	31	1:07	9:48	14:00	16:14
			0.6	11.0	10.0	10.2
NOVEMBER.						
☾	F	1	2:07	10:55	. . . . .	
			1.1	11.1	. . . . .	
	S	2	3:10	11:48	. . . . .	
			1.7	11.2	. . . . .	
P	S	3	4:17	12:29	19:22	22:40
			2.5	11.3	7.4	8.1
	M	4	5:20	12:59	19:35	. . .
			3.4	11.3	6.0	. . .
E	Tu	5	0:40	6:19	13:26	20:01
			8.3	4.4	11.2	4.5
	W	6	2:12	7:14	13:50	20:32
			9.0	5.5	11.2	3.2
	Th	7	3:20	8:04	14:15	21:04
			9.7	6.5	11.1	2.0
●	F	8	4:19	8:52	14:39	21:37
			10.4	7.4	10.9	1.1
	S	9	5:11	9:38	15:02	22:11
			10.9	8.2	10.7	0.6
	S	10	6:00	10:24	15:24	22:47
			11.3	8.8	10.4	0.5
	M	11	6:47	11:11	15:43	23:24
			11.4	9.2	10.2	0.7
S	Tu	12	7:37	12:07	15:40	. . .
			11.4	9.4	9.9	. . .
	W	13	0:06	8:28	13:20	14:30
			1.0	11.2	9.6	9.7
	Th	14	0:49	9:23	. . . . .	
			1.6	11.1	. . . . .	
	F	15	1:37	10:17	. . . . .	
			2.2	11.0	. . . . .	
A ☽	S	16	2:29	11:04	. . . . .	
			3.0	10.9	. . . . .	
	S	17	3:23	11:43	19:43	22:30
			3.7	10.8	7.0	7.2
	M	18	4:19	12:12	19:33	. . .
			4.5	10.7	6.1	. . .
E	Tu	19	0:08	5:13	12:34	19:36
			7.4	5.4	10.7	5.1
	W	20	1:41	6:02	12:51	19:49
			7.9	6.2	10.6	4.0
	Th	21	2:48	6:51	13:07	20:12
			8.7	7.0	10.6	2.8
	F	22	3:41	7:38	13:23	20:40
			9.5	7.8	10.7	1.7
	S	23	4:28	8:23	13:39	21:13
			10.2	8.5	10.8	0.7
○	S	24	5:14	9:08	13:54	21:50
			10.8	9.0	11.0	—0.1
	M	25	5:59	9:53	14:14	22:29
			11.2	9.5	11.2	—0.6
N	Tu	26	6:46	10:40	14:42	23:12
			11.5	9.9	11.2	—0.7
	W	27	7:35	11:35	15:10	23:59
			11.7	10.1	11.0	—0.5
P	Th	28	8:26	12:43	15:41	. . .
			11.7	10.1	10.5	. . .
	F	29	0:49	9:17	14:27	15:52
			0.1	11.7	9.7	9.8
	S	30	1:41	10:02	. . . . .	
			1.0	11.6	. . . . .	
DECEMBER.						
☾	S	1	2:37	10:43	18:08	21:08
			2.2	11.5	7.3	7.8
E	M	2	3:36	11:19	18:35	22:23
			3.6	11.5	5.7	7.6
	Tu	3	4:37	11:50	19:08	. . .
			5.1	11.4	4.2	. . .
	W	4	1:24	5:39	12:20	19:40
			8.2	6.4	11.2	2.8
	Th	5	2:47	6:41	12:47	20:13
			9.2	7.6	11.1	1.7
	F	6	3:48	7:42	13:15	20:46
			10.1	8.5	10.9	0.9
	S	7	4:38	8:37	13:42	21:19
			10.8	9.1	10.7	0.5
●	S	8	5:22	9:30	14:09	21:52
			11.3	9.5	10.5	0.3
S	M	9	6:02	10:18	14:34	22:27
			11.5	9.7	10.3	0.3
	Tu	10	6:41	11:09	14:54	23:04
			11.6	9.7	10.1	0.5
	W	11	7:21	12:00	14:32	23:42
			11.6	9.6	9.8	0.9
	Th	12	8:00	13:13	14:05	. . .
			11.5	9.5	9.6	. . .
A	F	13	0:21	8:39	. . . . .	
			1.4	11.4	. . . . .	
	S	14	1:00	9:16	. . . . .	
			2.1	11.2	. . . . .	
	S	15	1:41	9:48	18:20	19:34
			3.0	11.1	7.4	7.5
☽	M	16	2:23	10:16	18:06	21:39
			4.0	11.0	6.4	7.0
E	Tu	17	3:08	10:41	18:15	23:54
			5.1	10.8	5.3	7.2
	W	18	4:58	11:01	18:35	. . .
			6.3	10.8	4.1	. . .
	Th	19	1:51	4:54	11:20	19:02
			7.9	7.4	10.7	2.9
	F	20	3:03	5:55	11:38	19:34
			8.9	8.4	10.8	1.8
	S	21	3:54	6:54	11:58	20:10
			9.8	9.1	11.0	0.7
	S	22	4:37	7:50	12:22	20:49
			10.6	9.7	11.2	—0.2
N ○	M	23	5:17	8:44	12:56	21:31
			11.2	10.0	11.4	—0.8
	Tu	24	5:57	9:37	13:39	22:14
			11.6	10.2	11.4	—1.1
P	W	25	6:36	10:31	14:33	22:59
			11.9	10.1	11.3	—1.0
	Th	26	7:15	11:33	15:35	23:45
			12.0	9.8	10.8	—0.5
	F	27	7:52	12:43	16:48	. . .
			12.0	9.3	10.1	. . .
	S	28	0:30	8:29	14:06	18:13
			0.4	11.9	8.4	9.2
E	S	29	1:17	9:04	15:34	19:47
			1.8	11.8	7.1	8.3
☾	M	30	2:05	9:38	16:46	21:38
			3.3	11.6	5.7	7.6
	Tu	31	2:55	10:10	17:42	23:57
			5.1	11.4	4.2	7.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from 2 feet below Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 7.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Pacific Standard, 120th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:55 3.8	9:11 10.2	16:17 0.0	22:55 7.5
	Tu	2	3:59 4.3	10:07 10.6	17:10 −1.2	23:50 8.4
N	W	3	4:59 4.2	11:00 11.1	18:00 −2.4	. . . . .
○ P	Th	4	0:40 8.9	5:54 3.9	11:52 11.4	18:48 −2.9
	F	5	1:26 9.3	6:46 3.5	12:43 11.4	19:32 −2.8
	S	6	2:10 9.7	7:38 3.2	13:34 11.1	20:18 −2.4
	S	7	2:52 9.9	8:30 2.9	14:35 10.6	21:02 −1.7
	M	8	3:35 10.3	9:25 2.5	15:18 9.9	21:45 −0.6
E	Tu	9	4:18 10.2	10:23 2.5	16:15 9.0	22:31 0.7
☾	W	10	5:08 10.0	11:22 2.3	17:19 8.0	23:35 1.9
	Th	11	5:51 9.6	12:28 2.2	18:37 7.3	. . . . .
	F	12	0:17 3.2	6:42 9.3	13:43 1.9	20:08 6.9
	S	13	1:17 4.2	7:37 9.1	14:59 1.3	21:37 7.0
	S	14	2:25 4.9	8:34 9.0	16:00 0.7	22:58 7.0
	M	15	3:33 5.1	9:28 9.1	16:50 0.1	23:47 7.3
	Tu	16	4:33 5.2	10:17 9.2	17:37 −0.4	. . . . .
S A	W	17	0:27 7.6	5:22 5.1	11:00 9.3	18:07 −0.8
	Th	18	1:00 8.0	6:02 4.9	11:42 9.4	18:40 −1.0
●	F	19	1:30 8.5	6:38 4.6	12:20 9.5	19:08 −1.0
	S	20	1:55 8.8	7:12 4.2	12:54 9.5	19:37 −0.9
	S	21	2:17 9.3	7:46 3.9	13:30 9.5	20:05 −0.6
	M	22	2:40 9.5	8:20 3.5	14:06 9.3	20:35 −0.2
	Tu	23	3:07 9.7	8:58 3.1	14:43 8.9	21:05 0.4
E	W	24	3:37 9.7	9:40 2.7	15:27 8.5	21:41 1.3
	Th	25	4:07 9.6	10:20 2.3	16:14 7.9	22:17 2.2
☽	F	26	4:43 9.6	11:17 2.0	17:10 7.3	22:57 3.1
	S	27	5:28 9.4	12:22 1.7	18:27 6.7	23:48 4.0
	S	28	6:23 9.3	13:38 1.2	20:13 6.2	. . . . .
	M	29	0:57 4.9	7:30 9.3	14:55 0.4	21:53 6.7
	Tu	30	2:28 5.3	8:41 9.7	16:02 −0.5	22:58 7.2
N	W	31	3:50 4.9	9:50 10.1	16:59 −1.4	23:48 8.2

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	4:55 4.8	10:50 10.6	17:48 −2.1	. . . . .
○	F	2	0:30 9.1	5:50 3.5	11:45 11.1	18:33 −2.5
	S	3	1:09 9.7	6:42 2.7	12:38 11.3	19:16 −2.4
	S	4	1:48 10.3	7:28 2.0	13:28 11.3	19:57 −1.9
	M	5	2:22 10.9	8:16 1.4	14:17 10.9	20:35 −1.0
E	Tu	6	2:57 10.9	9:08 1.2	15:08 10.1	21:16 0.0
	W	7	3:35 10.7	9:50 1.2	15:55 9.2	21:57 1.3
	Th	8	4:13 10.2	10:42 1.3	16:50 8.1	22:38 2.7
☾	F	9	4:54 9.7	11:43 1.5	17:58 7.0	23:20 3.9
	S	10	5:41 9.2	12:58 1.7	19:37 6.5	. . . . .
	S	11	0:25 5.0	6:37 8.7	14:21 1.6	21:37 6.5
	M	12	1:42 5.6	7:46 8.4	15:35 1.3	23:00 7.2
S	Tu	13	3:28 5.6	8:58 8.3	16:30 0.7	23:41 7.5
A	W	14	4:31 5.8	9:58 8.4	17:10 0.2	. . . . .
	Th	15	0:11 8.0	5:17 4.8	10:48 8.7	17:44 −0.2
	F	16	0:35 8.5	5:58 4.3	11:32 9.2	18:14 −0.4
●	S	17	0:57 8.9	6:25 3.8	12:10 9.5	18:42 −0.5
	S	18	1:15 9.6	6:55 3.1	12:45 9.7	19:08 −0.5
	M	19	1:35 9.9	7:26 2.5	13:18 9.8	19:36 −0.2
E	Tu	20	1:56 10.1	7:57 1.9	13:58 9.7	20:07 0.3
	W	21	2:24 10.2	8:31 1.4	14:32 9.4	20:38 1.0
	Th	22	2:53 10.1	9:07 1.0	15:11 9.0	21:10 1.8
	F	23	3:25 10.0	9:51 1.0	15:58 8.3	21:40 2.8
	S	24	3:42 9.7	10:43 1.0	16:50 7.5	22:20 3.7
☽	S	25	4:47 9.5	11:50 1.1	18:08 6.5	23:10 4.8
	M	26	5:44 9.2	13:10 1.1	20:10 6.3	. . . . .
N	Tu	27	0:32 5.4	7:02 9.0	14:38 0.6	21:51 7.0
	W	28	2:27 5.4	8:27 9.1	15:50 −0.1	22:48 7.8
	Th	29	3:58 4.7	9:43 9.6	16:50 −0.8	23:28 8.7

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:54 3.6	10:47 10.3	17:32 −1.3	. . . . .
	S	2	0:05 9.6	5:44 2.5	11:48 10.9	18:14 −1.5
○	S	3	0:38 10.5	6:30 1.5	12:32 11.2	18:58 −1.3
E	M	4	1:12 11.0	7:18 0.6	13:20 11.2	19:30 −0.7
	Tu	5	1:45 11.1	7:55 0.1	14:03 10.8	20:10 0.1
	W	6	2:23 11.0	8:34 −0.1	14:48 10.0	21:46 1.1
	Th	7	2:55 10.7	9:18 0.1	15:33 9.1	21:20 2.2
	F	8	3:30 10.2	10:07 0.5	16:25 8.0	21:55 3.4
	S	9	4:06 9.6	11:01 1.0	17:29 7.1	22:34 4.5
☾	S	10	4:48 8.8	12:08 1.5	19:10 6.8	23:23 5.4
S	M	11	5:43 8.1	13:31 1.8	21:20 6.8	. . . . .
A	Tu	12	1:17 5.4	7:00 7.8	14:52 1.8	22:30 7.4
	W	13	3:16 5.2	8:29 7.5	15:52 1.5	23:03 8.0
	Th	14	4:18 4.9	9:39 7.8	16:33 1.0	23:27 8.5
	F	15	4:57 4.3	10:32 8.3	17:08 0.7	23:46 9.0
	S	16	5:30 3.5	11:15 8.9	17:38 0.5	. . . . .
	S	17	0:06 9.5	5:58 2.6	11:52 9.4	18:06 0.4
●	M	18	0:26 9.9	6:28 1.7	12:28 9.7	18:39 0.5
E	Tu	19	0:52 10.3	7:00 0.9	13:04 9.9	19:08 0.7
	W	20	1:20 10.3	7:31 0.4	13:41 10.0	19:41 1.2
	Th	21	1:47 10.4	8:08 −0.1	14:18 9.6	20:10 1.9
	F	22	2:17 10.4	8:45 −0.3	15:00 9.1	20:42 2.7
	S	23	2:50 10.2	9:30 −0.2	15:48 8.4	21:18 3.6
	S	24	3:28 9.9	10:22 0.1	16:48 7.6	22:00 4.4
N ☽	M	25	4:16 9.4	11:30 0.6	18:12 7.0	23:06 5.4
	Tu	26	5:22 8.8	12:51 0.9	20:04 6.8	. . . . .
	W	27	0:58 5.2	6:52 8.4	14:18 0.9	21:27 7.8
P	Th	28	2:40 4.9	8:24 8.6	15:28 0.5	22:14 8.7
	F	29	3:52 3.8	9:44 9.1	16:21 0.2	22:52 9.5
	S	30	4:47 2.5	10:44 9.8	17:07 0.0	23:27 10.2
E	S	31	5:32 1.8	11:37 10.4	17:48 0.1	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 5.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Sitka Standard, 135th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	M	1	0:00 10.5	6:18 0.4	12:24 10.7	18:28 0.3
	Tu	2	0:37 11.0	6:50 −0.3	13:05 10.6	19:03 0.7
	W	3	1:11 11.2	7:30 −0.7	13:50 10.0	19:38 1.4
	Th	4	1:40 11.1	8:11 −0.7	14:33 9.3	20:10 2.2
	F	5	2:15 10.8	8:52 −0.5	15:17 8.4	20:45 3.1
	S	6	2:50 10.3	9:36 0.2	16:07 7.3	21:20 3.9
S	S	7	3:24 9.6	10:25 0.8	17:05 6.5	22:02 4.9
	M	8	4:08 8.9	11:22 1.4	18:31 6.4	23:05 5.4
☾ A	Tu	9	4:57 8.1	12:31 1.8	20:18 6.9	. . . . .
	W	10	0:57 5.8	6:18 7.5	13:47 2.0	21:20 7.3
	Th	11	2:44 5.4	7:55 7.4	14:48 1.9	21:52 7.9
	F	12	3:42 4.7	9:08 7.7	15:37 1.8	22:18 8.4
	S	13	4:12 3.8	10:03 8.2	16:15 1.6	22:42 9.0
	S	14	4:53 2.7	10:48 8.7	16:55 1.4	23:08 9.6
E	M	15	5:22 1.6	11:30 9.2	17:30 1.3	23:40 10.1
	Tu	16	5:52 0.7	12:08 9.6	18:02 1.4	. . . . .
●	W	17	0:09 10.6	6:28 −0.2	12:46 9.7	18:35 1.7
	Th	18	0:38 11.1	7:05 −0.8	13:26 9.5	19:10 2.1
	F	19	1:10 11.1	7:45 −1.1	14:10 9.1	19:45 2.7
	S	20	1:45 11.0	8:30 −1.1	14:57 8.2	20:24 3.3
N P	S	21	2:25 10.8	9:17 −0.8	15:52 7.6	21:12 4.1
	M	22	3:10 10.3	10:12 −0.3	16:57 7.0	22:07 4.5
☽	Tu	23	4:05 9.6	11:17 0.3	18:15 7.4	23:30 4.9
	W	24	5:20 8.9	12:32 0.7	19:35 7.6	. . . . .
	Th	25	1:10 4.8	6:52 8.5	13:47 1.0	20:38 8.2
	F	26	2:37 4.0	8:24 8.5	14:58 1.2	21:26 8.9
	S	27	3:39 2.8	9:37 8.8	15:48 1.3	22:08 9.6
E	S	28	4:27 1.5	10:37 9.2	16:40 1.4	22:47 10.1
	M	29	5:08 0.6	11:28 9.6	17:20 1.6	23:23 10.7
	Tu	30	5:52 −0.3	12:13 9.6	17:58 1.9	23:58 11.0

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	6:32 −0.9	12:59 9.4	18:33 2.4	. . . . .
	Th	2	0:32 10.2	7:12 −1.1	13:40 8.7	19:07 2.9
	F	3	1:05 11.0	7:50 −1.1	14:25 8.1	19:43 3.5
	S	4	1:40 10.7	8:30 −0.8	15:09 7.6	20:20 4.0
S	S	5	2:14 10.1	10:11 −0.2	15:55 7.2	21:00 4.5
	M	6	2:50 9.4	9:53 0.3	16:46 6.8	21:48 5.2
A	Tu	7	3:30 8.7	10:40 1.0	17:45 7.3	22:58 5.6
	W	8	4:20 8.1	11:32 1.5	18:40 7.4	. . . . .
☾	Th	9	0:25 5.4	5:33 7.5	12:29 1.9	19:48 7.7
	F	10	1:48 5.0	7:02 7.0	13:29 2.2	20:27 8.2
	S	11	2:48 4.1	8:20 7.2	14:28 2.3	21:05 8.7
E	S	12	3:28 3.1	9:23 7.5	15:20 2.3	21:37 9.2
	M	13	4:07 2.0	10:15 8.1	16:02 2.3	22:12 9.9
	Tu	14	4:46 0.8	11:08 8.5	16:43 2.5	22:50 10.5
	W	15	5:25 −0.2	11:50 8.8	17:23 2.6	23:26 11.0
●	Th	16	6:05 −1.2	12:35 8.6	18:08 2.8	. . . . .
	F	17	0:04 11.4	6:48 −1.8	13:20 8.6	18:45 3.1
	S	18	0:43 11.5	7:33 −2.0	14:08 8.3	19:28 3.4
N P	S	19	1:26 11.4	8:20 −1.9	15:00 8.1	20:17 3.8
	M	20	2:12 11.0	9:10 −1.5	15:55 7.9	21:13 4.2
	Tu	21	3:05 10.3	10:03 −0.9	16:51 8.0	22:20 4.3
	W	22	4:05 9.5	11:02 −0.1	17:52 8.0	23:40 4.3
☽	Th	23	5:19 8.7	12:05 0.7	18:53 8.4	. . . . .
	F	24	1:00 8.9	6:45 8.2	13:10 1.4	19:50 9.0
E	S	25	2:13 8.0	8:10 8.0	14:17 2.0	20:40 9.4
	S	26	3:12 2.0	9:24 8.1	15:17 2.3	21:25 9.8
	M	27	4:05 1.1	10:25 8.3	16:08 2.7	22:12 10.3
	Tu	28	4:53 0.1	11:20 8.4	16:48 3.1	22:45 10.6
	W	29	5:37 −0.6	12:10 8.1	17:28 3.4	23:23 10.8
○	Th	30	6:18 −1.0	12:57 7.9	18:08 3.7	. . . . .
	F	31	0:00 10.9	6:57 −1.2	13:40 7.8	18:46 4.1

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	0:38 10.7	7:35 −1.2	14:22 7.6	19:25 4.3
	S	2	1:14 10.3	8:12 −0.9	15:02 7.5	20:05 4.5
	M	3	1:50 9.9	8:48 −0.5	15:38 7.5	20:50 4.8
A	Tu	4	2:28 9.3	9:25 0.0	16:17 7.6	21:38 4.9
	W	5	3:08 8.7	10:08 0.5	16:58 8.0	22:36 5.0
	Th	6	3:58 8.0	10:43 1.1	17:40 8.2	23:43 4.8
☾	F	7	4:56 7.5	11:38 1.6	18:23 8.4	. . . . .
	S	8	0:43 4.3	6:05 7.1	12:21 2.1	19:05 8.7
E	S	9	1:37 3.6	7:23 7.0	13:16 2.6	19:48 9.1
	M	10	2:32 2.6	8:37 7.1	14:10 3.0	20:33 9.6
	Tu	11	3:25 1.5	9:43 7.3	15:07 3.2	21:20 10.2
	W	12	4:15 0.3	10:43 7.4	15:58 3.5	22:07 10.8
	Th	13	5:07 −0.8	11:38 7.6	16:50 3.5	22:53 11.3
●	F	14	5:49 −1.7	12:29 8.0	17:40 3.6	23:40 11.6
N	S	15	6:36 −2.3	13:17 8.1	18:30 3.6	. . . . .
P	S	16	0:28 11.7	7:23 −2.5	14:08 8.2	19:22 3.6
	M	17	1:17 11.6	8:10 −2.4	14:52 8.4	20:15 3.6
	Tu	18	2:07 11.2	8:59 −1.9	15:41 8.6	21:13 3.5
	W	19	3:03 10.5	9:48 −1.2	16:28 8.9	22:15 3.4
	Th	20	4:08 9.7	10:40 −0.2	17:17 9.3	23:23 3.2
☽ E	F	21	5:12 8.7	11:31 0.8	18:08 9.5	. . . . .
	S	22	0:30 2.8	6:27 7.9	12:35 1.8	19:00 9.5
	S	23	1:39 2.4	7:48 7.5	13:32 2.7	19:52 9.7
	M	24	2:47 1.7	9:12 7.3	14:30 3.4	20:42 9.9
	Tu	25	3:47 0.9	10:20 7.2	15:28 3.9	21:31 10.1
	W	26	4:40 0.1	11:22 7.1	16:21 4.2	22:16 10.3
	Th	27	5:26 −0.5	12:13 7.2	17:10 4.4	22:59 10.4
S	F	28	6:07 −0.9	12:58 7.4	17:57 4.5	23:40 10.4
○	S	29	6:45 −1.1	13:37 7.6	18:37 4.5	. . . . .
	S	30	0:20 10.3	7:20 −1.1	14:14 7.8	19:15 4.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 5.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Sitka Standard, 135th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	0:59 10.0	7:58 −1.0	14:43 7.9	19:55 4.5
	Tu	2	1:37 9.8	8:25 −0.6	15:10 8.0	20:35 4.3
	W	3	2:12 9.4	8:56 −0.2	15:37 8.6	21:18 4.2
	Th	4	2:52 8.9	9:27 0.3	16:08 8.8	22:01 4.0
	F	5	3:34 8.4	10:00 0.9	16:40 9.0	22:50 3.8
E	S	6	4:25 7.8	10:40 1.6	17:17 9.1	23:38 3.4
☾	S	7	5:23 7.3	11:20 2.3	17:56 9.2	. . . . .
	M	8	0:38 2.9	6:35 6.8	12:10 8.0	18:44 9.5
	Tu	9	1:48 2.1	7:57 6.5	13:06 8.7	19:38 9.8
	W	10	2:50 1.1	9:21 6.3	14:15 8.1	20:36 10.3
	Th	11	3:50 0.1	10:38 6.6	15:25 8.2	21:35 10.8
N	F	12	4:46 −0.9	11:30 7.1	16:30 8.1	22:33 11.2
	S	13	5:35 −1.8	12:20 7.8	17:28 8.8	23:26 11.7
● P	S	14	6:23 −2.4	13:07 8.3	18:23 8.5	. . . . .
	M	15	0:19 11.8	7:10 −2.6	13:50 8.8	19:16 8.1
	Tu	16	1:10 11.8	7:55 −2.4	14:30 9.3	20:07 2.7
	W	17	2:03 11.4	8:39 −1.8	15:10 10.0	21:00 2.4
E	Th	18	2:58 10.7	9:22 −0.9	15:51 10.1	21:55 2.2
	F	19	3:52 9.7	10:07 0.2	16:35 10.1	22:50 2.1
☽	S	20	4:52 8.6	10:58 1.4	17:19 9.9	23:52 2.1
	S	21	6:01 7.7	11:48 2.2	18:08 9.7	. . . . .
	M	22	1:05 2.0	7:25 6.9	12:43 8.6	19:08 9.6
	Tu	23	2:21 1.6	9:00 6.5	13:50 4.4	20:01 9.5
	W	24	3:29 1.0	10:25 6.8	15:03 4.5	21:00 9.5
	Th	25	4:27 0.4	11:28 7.0	16:12 5.1	21:57 9.6
S	F	26	5:14 −0.2	12:18 7.2	17:08 4.9	22:47 9.8
	S	27	5:58 −0.6	12:48 7.5	17:52 4.6	23:30 9.9
○ A	S	28	6:27 −0.8	13:18 7.9	18:30 4.8	. . . . .
	M	29	0:11 10.0	6:58 −0.9	13:43 8.2	19:05 4.1
	Tu	30	0:48 10.0	7:27 −0.7	14:05 8.5	19:38 3.7
	W	31	1:22 9.8	7:58 −0.4	14:27 9.0	20:13 3.4

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	1:58 9.5	8:20 0.0	14:50 9.3	20:46 3.0
E	F	2	2:32 9.2	8:51 0.5	15:19 9.5	21:23 2.8
	S	3	3:12 8.6	9:24 1.2	15:47 9.5	22:02 2.4
	S	4	3:57 8.0	9:55 2.0	16:20 9.6	22:51 2.2
☾	M	5	4:48 7.3	10:31 2.8	17:03 9.6	23:51 2.0
	Tu	6	5:54 6.6	11:15 3.6	17:53 9.5	. . . . .
	W	7	1:08 1.6	7:28 5.8	12:17 4.4	18:55 9.6
	Th	8	2:22 1.0	9:15 6.0	13:45 4.9	20:06 9.9
N	F	9	3:30 0.1	10:28 6.5	15:15 4.4	21:18 10.4
	S	10	4:30 −0.8	11:20 7.3	16:27 4.1	22:21 11.0
	S	11	5:23 −1.5	12:03 8.2	17:23 3.4	23:20 11.5
P ●	M	12	6:08 −2.0	12:42 9.0	18:15 2.6	. . . . .
	Tu	13	0:13 11.8	6:51 −2.1	13:20 9.7	19:08 1.9
	W	14	1:05 11.8	7:33 −1.8	13:58 10.5	19:52 1.8
E	Th	15	1:55 11.4	8:12 −1.1	14:32 10.7	20:38 0.9
	F	16	2:43 10.6	8:55 −0.1	15:08 10.7	21:22 0.9
	S	17	3:34 9.7	9:36 1.0	15:50 10.4	22:16 1.1
	S	18	4:29 8.5	10:18 2.2	16:31 10.0	23:16 1.4
☽	M	19	5:35 7.3	11:01 3.4	17:18 9.6	. . . . .
	Tu	20	0:27 1.6	7:07 6.6	12:00 4.4	18:15 9.1
	W	21	1:50 1.6	8:59 6.4	13:22 5.4	19:26 8.9
S	Th	22	3:07 1.3	10:26 6.7	15:02 5.4	20:40 8.8
	F	23	4:08 1.8	11:16 7.2	16:15 5.2	21:44 8.9
A	S	24	4:53 0.4	11:51 7.9	17:04 4.6	22:36 9.2
	S	25	5:30 0.0	12:17 8.3	17:42 4.1	23:21 9.6
	M	26	6:00 −0.2	12:40 8.7	18:14 3.6	. . . . .
○	Tu	27	0:00 9.8	6:30 −0.3	13:00 9.1	18:43 8.0
	W	28	0:34 9.9	6:58 −0.1	13:18 9.5	19:13 8.5
E	Th	29	1:06 9.9	7:18 0.1	13:40 9.8	19:43 2.0
	F	30	1:40 9.6	7:50 0.6	14:05 10.0	20:12 1.6
	S	31	2:16 9.3	8:19 1.2	14:32 10.0	20:47 1.2

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	2:50 8.8	8:47 1.8	15:01 9.9	21:30 1.1
	M	2	3:33 8.1	9:18 2.6	15:40 9.9	22:16 1.2
	Tu	3	4:28 7.3	9:53 3.4	16:17 9.7	23:16 1.3
☾	W	4	5:38 6.5	10:40 4.7	17:12 9.5	. . . . .
N	Th	5	0:33 1.3	7:20 5.8	11:56 5.0	18:27 9.3
	F	6	2:00 1.0	9:12 6.2	13:48 5.3	19:53 9.5
	S	7	3:14 0.4	10:13 7.0	15:20 4.6	21:12 10.0
	S	8	4:14 −0.3	10:57 8.2	16:25 3.5	22:20 10.5
P	M	9	5:02 −0.9	11:35 9.2	17:16 2.5	23:16 11.1
●	Tu	10	5:47 −1.1	12:09 10.1	18:08 1.4	. . . . .
E	W	11	0:08 11.4	6:27 −1.0	12:48 10.8	18:48 0.5
	Th	12	0:56 11.4	7:07 −0.6	13:20 11.1	19:30 −0.2
	F	13	1:42 11.0	7:47 0.0	13:56 11.1	20:10 −0.3
	S	14	2:26 10.2	8:25 1.0	14:30 11.0	20:55 −0.1
	S	15	3:15 9.2	9:00 2.0	15:08 10.6	21:45 0.2
	M	16	4:08 8.0	9:38 3.1	15:47 10.0	22:41 0.8
☽	Tu	17	5:44 6.9	10:22 4.2	16:31 9.3	23:47 1.4
S	W	18	6:50 6.3	11:28 5.3	17:30 8.6	. . . . .
	Th	19	1:10 1.7	8:45 6.5	13:16 5.5	18:50 8.1
	F	20	2:30 1.6	9:58 7.2	15:04 5.3	20:20 8.0
A	S	21	3:30 1.4	10:38 7.8	16:10 4.7	21:30 8.2
	S	22	4:18 1.1	11:06 8.3	16:45 4.1	22:23 8.6
	M	23	4:52 0.8	11:27 8.9	17:19 3.3	23:05 9.1
	Tu	24	5:22 0.7	11:47 9.3	17:47 2.5	23:40 9.4
	W	25	5:50 0.7	12:07 9.7	18:17 1.8	. . . . .
E ○	Th	26	0:16 9.6	6:20 0.8	12:33 10.1	18:40 1.1
	F	27	0:49 9.7	6:48 1.0	12:58 10.3	19:10 0.5
	S	28	1:23 9.6	7:17 1.4	13:22 10.5	19:44 0.1
	S	29	1:58 9.2	7:45 2.0	13:52 10.5	20:21 −0.1
	M	30	2:38 8.6	8:16 2.7	14:24 10.5	21:04 0.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 5.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Sitka Standard, 135th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.), and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.: E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	3:23	8:50	14:59	21:53
			7.9	8.4	10.2	0.3
N	W	2	4:19	9:30	15:45	22:56
			7.1	4.2	9.7	0.7
☾	Th	3	5:36	10:32	16:46	. . .
			6.4	5.2	9.2	. . .
	F	4	0:12	7:17	12:13	18:13
			1.0	6.2	5.4	9.2
	S	5	1:38	8:45	14:05	19:50
			1.0	7.0	4.8	8.8
	S	6	2:50	9:37	15:22	21:13
			0.7	8.2	3.9	9.3
P	M	7	3:50	10:20	16:16	22:17
			0.4	9.1	2.6	9.9
	Tu	8	4:37	10:55	17:03	23:10
			0.3	9.9	1.3	10.4
E	W	9	5:23	11:35	17:46	. . .
			0.3	10.6	0.3	. . .
●	Th	10	0:00	6:00	12:09	18:25
			10.6	0.4	11.1	−0.6
	F	11	0:28	6:38	12:48	19:09
			10.6	0.9	11.4	−1.1
	S	12	1:28	7:14	13:17	19:48
			10.2	1.5	11.4	−1.1
	S	13	2:13	7:50	13:51	20:32
			9.4	2.3	11.2	−0.9
	M	14	3:00	8:28	14:28	21:17
			8.3	3.1	10.6	−0.4
S	Tu	15	3:51	9:05	15:07	22:07
			7.4	3.9	9.9	0.3
	W	16	4:53	9:53	15:51	23:05
			6.8	4.8	9.0	1.1
☽	Th	17	6:17	11:06	16:48	. . .
			6.4	5.4	8.2	. . .
	F	18	0:15	7:55	13:00	18:13
			1.6	7.1	5.4	7.6
A	S	19	1:30	8:58	14:39	19:50
			1.9	7.6	5.2	7.3
	S	20	2:34	9:35	15:35	21:01
			2.0	8.1	4.4	7.6
	M	21	3:22	10:01	16:12	21:55
			1.9	8.5	3.5	7.9
	Tu	22	4:01	10:26	16:43	22:38
			1.8	9.1	2.5	8.4
E	W	23	4:40	10:50	17:08	23:17
			1.7	9.6	1.6	8.9
	Th	24	5:10	11:19	17:40	23:53
			1.7	10.1	0.7	9.2
○	F	25	5:40	11:46	18:11	. . .
			1.8	10.5	−0.1	. . .
	S	26	0:30	6:12	12:15	18:46
			9.3	2.1	10.9	−0.8
	S	27	1:08	6:43	12:46	19:23
			9.1	2.4	11.0	−1.1
	M	28	1:50	7:18	13:20	20:04
			8.8	2.9	11.1	−1.2
	Tu	29	2:33	7:55	13:57	20:50
			8.0	3.4	10.9	−1.0
N	W	30	3:24	8:37	14:42	21:41
			7.5	3.9	10.4	−0.5
	Th	31	4:23	9:32	15:31	22:42
			7.0	4.7	9.8	0.1
NOVEMBER.						
☾	F	1	5:35	10:50	16:38	23:51
			6.8	5.0	9.1	0.7
	S	2	6:51	12:29	18:08	. . .
			7.3	4.8	8.4	. . .
P	S	3	1:07	7:58	14:00	19:45
			1.2	8.1	4.1	8.3
	M	4	2:15	8:52	15:08	21:05
			1.4	8.8	2.9	8.6
E	Tu	5	3:15	9:35	15:55	22:08
			1.6	9.5	1.6	9.1
	W	6	4:10	10:18	16:43	23:02
			1.6	10.2	0.5	9.4
	Th	7	4:52	10:55	17:37	23:51
			1.8	10.9	−0.5	9.5
●	F	8	5:32	11:32	18:10	. . .
			2.1	11.3	−1.2	. . .
	S	9	0:37	6:10	12:08	18:51
			9.1	2.4	11.5	−1.6
	S	10	1:22	6:47	12:45	19:33
			8.8	2.9	11.4	−1.6
	M	11	2:08	7:23	13:22	20:13
			8.3	3.4	11.1	−1.5
S	Tu	12	2:58	8:02	13:59	20:55
			7.8	3.9	10.4	−0.8
	W	13	3:40	8:47	14:40	21:38
			7.4	4.4	9.8	−0.1
	Th	14	4:32	9:38	15:20	22:25
			7.0	5.0	8.9	0.7
	F	15	5:30	10:48	16:12	23:15
			7.0	5.4	8.2	1.4
A ☽	S	16	6:31	12:17	17:22	. . .
			7.6	5.2	7.5	. . .
	S	17	0:12	7:25	13:40	18:48
			2.0	7.8	5.0	6.9
	M	18	1:08	8:10	14:40	20:08
			2.4	8.3	4.2	6.9
E	Tu	19	2:10	8:48	15:20	21:12
			2.6	8.8	3.2	7.1
	W	20	3:00	9:20	15:57	22:05
			2.7	9.2	2.2	7.7
	Th	21	3:43	9:53	16:35	22:52
			2.8	9.8	1.1	8.0
	F	22	4:23	10:29	17:12	23:37
			2.9	10.4	0.0	8.1
	S	23	5:01	11:05	17:50	. . .
			3.0	10.9	−1.0	. . .
☾	S	24	0:20	5:40	11:42	18:30
			8.3	3.2	11.3	−1.7
	M	25	1:02	6:21	12:21	19:11
			8.3	3.3	11.5	−2.0
N	Tu	26	1:47	7:03	13:01	19:55
			8.2	3.5	11.5	−2.0
	W	27	2:34	7:50	13:45	20:42
			8.1	3.8	11.2	−1.7
P	Th	28	3:24	8:40	14:45	21:32
			7.9	4.0	10.6	−1.1
	F	29	4:17	9:42	15:31	22:27
			7.9	4.2	9.8	−0.3
	S	30	5:13	10:55	16:38	23:25
			8.0	4.3	9.1	−0.4
DECEMBER.						
☾	S	1	6:12	12:17	18:00	. . .
			8.5	3.9	8.2	. . .
E	M	2	0:28	7:09	13:22	19:29
			1.4	8.9	3.2	7.8
	Tu	3	1:38	8:03	14:38	20:50
			2.1	9.3	2.3	7.9
	W	4	2:40	8:55	15:38	21:00
			2.5	9.7	1.2	7.5
	Th	5	3:34	9:38	16:30	22:58
			2.9	10.3	0.2	8.0
	F	6	4:22	10:21	17:17	23:50
			3.2	10.7	−0.7	8.0
	S	7	5:07	11:02	18:00	. . .
			3.5	11.0	−1.3	. . .
●	S	8	0:39	5:50	11:43	18:41
			8.0	3.7	11.2	−1.6
S	M	9	1:23	6:30	12:22	19:20
			7.9	3.9	11.1	−1.6
	Tu	10	2:06	7:11	13:02	19:58
			7.9	4.1	10.8	−1.4
	W	11	2:47	7:51	13:41	20:35
			7.8	4.3	10.2	−1.0
	Th	12	3:24	8:37	14:19	21:11
			7.8	4.5	9.6	−0.3
A	F	13	4:00	9:25	15:00	21:47
			7.8	4.6	8.9	0.3
	S	14	4:38	10:18	15:45	22:27
			8.2	4.8	8.3	1.0
	S	15	5:18	11:20	16:38	23:08
			8.3	4.7	7.5	1.7
☽	M	16	6:00	12:22	17:43	23:55
			8.4	4.4	6.9	2.4
E	Tu	17	6:41	13:17	19:00	. . .
			8.7	3.8	6.6	. . .
	W	18	0:49	7:25	14:17	20:18
			2.9	8.9	3.0	6.5
	Th	19	1:42	8:10	15:12	21:30
			3.5	9.3	2.0	6.8
	F	20	2:40	8:57	16:02	22:32
			3.7	9.9	0.8	6.8
	S	21	3:37	9:45	16:48	23:25
			4.1	10.4	−0.4	7.2
	S	22	4:30	10:33	17:33	. . .
			3.9	11.0	−1.4	. . .
N ○	M	23	0:15	5:20	11:20	18:18
			7.7	3.8	11.4	−2.1
	Tu	24	1:00	6:10	12:08	19:03
			8.0	3.7	11.7	−2.5
P	W	25	1:44	6:59	12:55	19:47
			8.3	3.6	11.7	−2.5
	Th	26	2:26	7:48	13:43	20:32
			8.6	3.4	11.4	−2.1
	F	27	3:10	8:42	14:36	21:18
			8.8	3.3	10.9	−1.4
	S	28	3:53	9:38	15:30	22:05
			9.0	3.2	10.1	−0.4
E	S	29	4:41	10:42	16:32	22:53
			9.4	3.0	9.1	0.7
☾	M	30	5:28	11:45	17:43	23:50
			9.5	2.9	8.0	1.8
	Tu	31	6:20	12:55	19:04	. . .
			9.5	2.5	7.4	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 5.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Sitka Standard, 135th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
JANUARY.						
	M	1	3:13	9:38	16:42	23:26
			3.8	9.6	−0.5	6.5
	Tu	2	4:14	10:30	17:36	. . .
			3.8	10.2	−1.4	. . .
N	W	3	0:20	5:10	11:24	18:26
			6.7	3.2	10.7	−2.1
○ P	Th	4	1:08	6:04	12:12	19:11
			7.0	2.9	10.9	−2.5
	F	5	1:52	6:56	13:02	19:59
			7.4	2.7	11.0	−2.5
	S	6	2:37	7:47	13:52	20:41
			7.7	2.5	10.7	−2.2
	S	7	3:19	8:40	14:44	21:26
			8.2	2.3	10.2	−1.6
	M	8	4:00	9:36	15:37	22:10
			8.4	2.2	9.4	−0.7
E	Tu	9	4:42	10:32	16:34	22:54
			8.5	2.2	8.3	0.3
☾	W	10	5:30	11:39	17:38	23:44
			8.5	2.2	7.3	1.3
	Th	11	6:20	12:49	18:52	. . .
			8.4	2.3	6.5	. . .
	F	12	0:36	7:18	14:06	20:21
			2.2	8.3	2.0	5.9
	S	13	1:29	8:09	15:24	21:50
			3.1	8.4	1.6	5.7
	S	14	2:30	9:05	16:29	23:04
			3.7	8.5	1.0	5.8
	M	15	3:33	9:58	17:19	23:58
			4.1	8.7	0.5	6.0
	Tu	16	4:30	10:42	18:00	. . .
			4.3	8.8	0.0	. . .
S A	W	17	0:41	5:20	11:21	18:30
			6.4	4.3	9.0	−0.3
	Th	18	1:17	6:00	11:59	19:01
			6.8	3.9	9.2	−0.6
●	F	19	1:46	6:36	12:36	19:29
			7.0	3.7	9.3	−0.7
	S	20	2:12	7:12	13:12	19:57
			7.2	3.4	9.3	−0.7
	S	21	2:36	7:48	13:48	20:26
			7.4	3.1	9.1	−0.6
	M	22	2:59	8:26	14:24	20:57
			7.6	2.7	8.8	−0.2
	Tu	23	3:24	9:06	15:08	21:28
			7.9	2.4	8.4	0.2
E	W	24	3:54	9:49	15:46	22:07
			8.2	2.2	7.8	0.9
	Th	25	4:29	10:39	16:36	22:42
			8.4	1.9	7.2	1.6
☽	F	26	5:06	11:32	17:33	23:21
			8.5	1.7	6.4	2.3
	S	27	5:52	12:40	18:52	. . .
			8.6	1.6	5.6	. . .
	S	28	0:11	6:52	14:00	20:42
			3.0	8.7	1.3	5.1
	M	29	1:14	7:59	15:22	22:24
			4.0	8.9	0.6	5.5
	Tu	30	2:36	9:08	16:32	23:29
			4.2	9.3	−0.3	5.9
N	W	31	4:00	10:14	17:29	. . .
			4.0	9.8	−1.0	. . .
FEBRUARY.						
P	Th	1	0:16	5:05	11:14	18:16
			6.5	3.5	10.3	−1.7
○	F	2	0:57	6:02	12:08	19:01
			7.5	2.8	10.6	−2.0
	S	3	1:37	6:54	13:00	19:44
			8.2	2.2	10.8	−2.0
	S	4	2:13	7:44	13:50	20:22
			8.7	1.6	10.6	−1.7
	M	5	2:49	8:31	14:38	21:00
			9.1	1.2	10.1	−1.1
E	Tu	6	3:24	9:20	15:26	21:40
			9.2	1.0	9.2	−0.2
	W	7	4:00	10:09	16:14	22:19
			9.3	1.1	8.2	0.8
	Th	8	4:40	11:01	17:09	22:56
			9.0	1.4	7.2	1.8
☾	F	9	5:21	11:58	18:09	23:34
			8.7	1.8	6.1	2.7
	S	10	6:09	13:12	19:41	. . .
			8.4	2.0	5.2	. . .
	S	11	0:18	7:05	14:44	21:38
			8.7	8.1	1.9	5.1
	M	12	1:23	8:14	16:04	23:06
			4.5	7.9	1.5	5.5
S	Tu	13	3:00	9:21	17:01	23:56
			4.8	7.9	1.0	5.8
A	W	14	4:24	10:21	17:40	. . .
			4.8	8.2	0.6	. . .
	Th	15	0:30	5:18	11:09	18:11
			6.5	4.3	8.4	0.2
	F	16	0:56	5:56	11:49	18:38
			7.0	3.8	8.7	−0.1
●	S	17	1:18	6:30	12:28	19:05
			7.3	3.2	9.0	−0.3
	S	18	1:39	7:02	13:04	19:30
			7.7	2.6	9.2	−0.3
	M	19	1:58	7:35	13:38	20:00
			8.1	1.9	9.2	−0.2
E	Tu	20	2:20	8:10	14:14	20:32
			8.5	1.4	9.0	0.1
	W	21	2:46	8:47	14:52	21:03
			8.8	1.0	8.6	0.7
	Th	22	3:13	9:28	15:32	21:34
			8.9	0.6	8.1	1.2
	F	23	3:43	10:08	16:16	22:06
			9.0	0.6	7.3	2.0
	S	24	4:26	11:02	17:10	22:42
			9.0	0.8	6.3	2.7
☽	S	25	5:12	12:06	18:30	23:30
			8.9	1.0	5.4	3.7
	M	26	6:10	13:30	20:44	. . .
			8.7	1.1	5.0	. . .
N	Tu	27	0:42	7:26	15:08	22:26
			4.7	8.6	0.9	5.5
	W	28	2:26	8:50	16:20	23:20
			4.7	8.8	0.2	6.1
P	Th	29	4:02	10:10	17:16	23:58
			4.1	9.2	−0.5	7.2
MARCH.						
	F	1	5:08	11:13	18:01	. . .
			3.0	9.7	−0.9	. . .
	S	2	0:34	6:01	12:07	18:41
			8.0	2.0	10.2	−1.1
○	S	3	1:08	6:49	12:57	19:20
			8.8	1.2	10.3	−1.1
E	M	4	1:41	7:32	13:42	19:56
			9.4	0.6	10.2	−0.8
	Tu	5	2:12	8:16	14:26	20:32
			9.7	0.0	9.6	−0.2
	W	6	2:46	8:58	15:09	21:07
			9.7	0.0	9.0	0.5
	Th	7	3:18	9:38	15:52	21:39
			9.7	0.2	8.0	1.4
	F	8	3:52	10:24	16:38	22:10
			9.4	0.6	6.9	2.3
	S	9	4:29	11:14	17:34	22:40
			8.9	1.2	5.8	3.2
☾	S	10	5:11	12:16	19:02	23:21
			8.4	1.7	5.1	4.2
S	M	11	6:01	13:41	21:22	. . .
			7.8	2.1	5.0	. . .
A	Tu	12	0:16	7:14	15:18	22:46
			4.8	7.3	2.0	5.5
	W	13	2:45	8:44	16:22	23:26
			4.5	7.1	1.7	6.3
	Th	14	4:21	9:59	17:08	23:52
			4.7	7.3	1.3	6.7
	F	15	5:07	10:49	17:34	. . .
			3.9	7.8	1.0	. . .
	S	16	0:14	5:41	11:36	18:01
			7.3	3.1	8.3	0.6
	S	17	0:32	6:11	12:14	18:30
			7.8	2.3	8.7	0.4
● E	M	18	0:52	6:42	12:52	19:01
			8.3	1.4	9.0	0.4
	Tu	19	1:14	7:14	13:27	19:30
			8.8	0.6	9.0	0.5
	W	20	1:42	7:49	14:01	20:00
			9.1	0.1	8.9	0.8
	Th	21	2:09	8:26	14:38	20:31
			9.4	−0.4	8.5	1.3
	F	22	2:39	9:04	15:21	21:03
			9.5	−0.5	7.8	1.9
	S	23	3:12	9:50	16:07	21:39
			9.6	−0.4	7.0	2.6
	S	24	3:52	10:42	17:06	22:19
			9.4	0.0	6.1	3.2
N ☽	M	25	4:39	11:49	18:34	23:14
			8.9	0.5	5.3	4.1
	Tu	26	5:44	13:13	20:44	. . .
			8.5	1.0	5.5	. . .
	W	27	0:47	7:14	14:49	22:02
			4.8	8.2	1.0	6.1
P	Th	28	2:43	8:49	16:00	22:49
			4.3	8.2	0.6	7.1
	F	29	4:10	10:10	16:52	23:26
			3.3	8.5	0.3	8.0
	S	30	5:07	11:11	17:34	23:58
			2.2	9.0	0.0	8.8
E	S	31	5:54	12:02	18:14	. . .
			1.0	9.4	0.0	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th Meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
○	M	1	0:30	6:36	12:48	18:52
			9.4	0.2	9.6	0.0
	Tu	2	1:04	7:14	13:30	19:26
			9.8	−0.5	9.5	0.4
	W	3	1:36	7:51	14:12	19:57
			10.0	−0.8	9.0	1.0
	Th	4	2:06	8:31	14:51	20:29
			10.1	−0.7	8.2	1.5
	F	5	2:38	9:11	15:33	21:00
			9.9	−0.4	7.4	2.2
	S	6	3:12	9:53	16:17	21:30
			9.5	0.1	6.5	3.0
S	S	7	3:48	10:38	17:12	22:04
			8.9	0.7	5.5	3.8
	M	8	4:24	11:30	18:30	22:50
			8.2	1.3	5.2	4.8
☾ A	Tu	9	5:15	12:36	20:32	. . .
			7.4	1.8	5.4	. . .
	W	10	0:10	6:26	14:00	21:46
			4.8	6.9	2.1	6.0
	Th	11	2:22	8:04	15:11	22:24
			4.8	6.6	2.1	6.5
	F	12	3:52	9:28	16:02	22:48
			4.2	6.8	1.8	7.0
	S	13	4:36	10:28	16:40	23:12
			3.3	7.3	1.8	7.6
	S	14	5:10	11:13	17:19	23:34
			2.3	7.8	1.4	8.1
E	M	15	5:42	11:54	17:50	. . .
			1.3	8.2	1.3	. . .
	Tu	16	0:04	6:16	12:30	18:22
			8.8	0.3	8.6	1.3
●	W	17	0:32	6:47	13:10	18:54
			9.4	−0.5	8.6	1.4
	Th	18	1:01	7:24	13:49	19:28
			9.9	−1.1	8.4	1.7
	F	19	1:34	8:07	14:31	20:02
			10.1	−1.4	8.0	2.1
	S	20	2:08	8:49	15:18	20:38
			10.2	−1.4	7.3	2.6
N	S	21	2:47	9:40	16:11	21:20
			10.0	−1.0	6.7	3.1
P	M	22	3:30	10:34	17:16	22:14
			9.6	−0.5	6.3	3.8
☽	Tu	23	4:25	11:39	18:40	23:26
			8.8	0.2	6.0	4.3
	W	24	5:38	12:56	20:11	. . .
			8.1	0.8	6.5	. . .
	Th	25	1:10	7:12	14:14	21:16
			4.1	7.6	1.1	7.1
	F	26	2:54	8:49	15:23	22:02
			3.5	7.6	1.1	7.8
	S	27	4:02	10:04	16:14	22:40
			2.4	8.0	1.2	8.5
E	S	28	4:52	11:04	17:04	23:16
			1.2	8.3	1.2	9.1
	M	29	5:34	11:52	17:42	23:50
			0.3	8.7	1.3	9.6
	Tu	30	6:11	12:38	18:16	. . .
			−0.5	8.6	1.5	. . .
MAY.						
○	W	1	0:24	6:58	13:20	18:49
			10.1	−0.9	8.4	1.8
	Th	2	0:58	7:33	14:00	19:20
			10.2	−1.1	8.0	2.2
	F	3	1:30	8:11	14:40	19:52
			10.2	−1.0	7.5	2.6
	S	4	2:03	8:49	15:21	20:28
			9.9	−0.7	6.9	3.0
S	S	5	2:37	9:28	16:06	21:02
			9.4	−0.2	6.5	3.6
	M	6	3:11	10:09	16:53	21:44
			8.7	0.3	5.7	4.2
A	Tu	7	3:48	10:55	17:52	22:34
			8.0	0.9	5.6	4.5
☾	W	8	4:35	11:46	19:06	23:58
			7.3	1.5	6.0	4.8
	Th	9	5:40	12:44	20:12	. . .
			6.7	1.9	6.3	. . .
	F	10	1:38	7:12	13:46	21:00
			4.4	6.3	2.2	6.8
	S	11	2:58	8:42	14:50	21:34
			3.7	6.4	2.3	7.4
E	S	12	3:49	9:49	15:42	22:06
			2.7	6.7	2.2	8.0
	M	13	4:26	10:42	16:24	22:39
			1.7	7.2	2.2	8.7
	Tu	14	5:04	11:29	17:02	23:13
			0.7	7.6	2.2	9.4
	W	15	5:46	12:14	17:41	23:50
			−0.4	7.7	2.2	10.0
●	Th	16	6:27	12:59	18:20	. . .
			−1.3	7.8	2.3	. . .
	F	17	0:28	7:10	13:44	19:00
			10.5	−1.8	7.7	2.5
	S	18	1:07	7:54	14:30	19:41
			10.6	−2.1	7.5	2.7
N P	S	19	1:48	8:42	15:20	20:26
			10.5	−1.9	7.3	3.0
	M	20	2:34	9:32	16:14	21:18
			10.1	−1.5	7.1	3.4
	Tu	21	3:24	10:28	17:16	22:28
			9.5	−0.8	7.1	3.6
	W	22	4:24	11:28	18:20	23:42
			8.7	−0.1	7.1	3.7
☽	Th	23	5:40	12:30	19:28	. .
			7.9	0.6	7.4	. . .
	F	24	1:14	7:06	13:34	20:26
			3.3	7.3	1.3	7.8
E	S	25	2:38	8:38	14:40	21:15
			2.6	7.1	1.7	8.3
	S	26	3:40	9:50	15:36	21:58
			1.8	7.3	2.0	8.9
	M	27	4:32	10:50	16:32	22:38
			0.8	7.4	2.2	9.4
	Tu	28	5:20	11:42	17:02	23:12
			0.0	7.4	2.5	9.8
	W	29	6:02	12:28	17:40	23:50
			−0.6	7.4	2.7	10.0
○	Th	30	6:41	13:12	18:14	. . .
			−0.9	7.2	3.0	. . .
	F	31	0:24	7:19	13:53	18:50
			10.1	−1.1	7.0	3.2
JUNE.						
S	S	1	1:00	7:54	14:34	19:27
			10.0	−1.0	6.9	3.4
	S	2	1:34	8:30	15:14	20:04
			9.6	−0.8	6.5	3.7
	M	3	2:10	9:06	15:50	20:44
			9.2	−0.4	6.5	3.8
A	Tu	4	2:47	9:44	16:30	21:30
			8.6	0.0	6.5	4.1
	W	5	3:26	10:21	17:14	22:21
			8.0	0.5	6.6	4.2
	Th	6	4:09	11:04	18:03	23:30
			7.5	1.0	6.8	4.1
☾	F	7	5:08	11:48	18:48	. . .
			6.8	1.5	7.1	. . .
	S	8	0:43	6:21	12:46	19:34
			3.7	6.3	2.0	7.5
E	S	9	1:54	7:46	13:40	20:20
			3.1	6.1	2.4	7.9
	M	10	2:48	9:01	14:32	21:00
			2.2	6.2	2.6	8.5
	Tu	11	3:44	10:10	15:26	21:48
			1.2	6.4	2.8	9.2
	W	12	4:36	11:09	16:14	22:34
			0.2	6.7	2.8	9.9
	Th	13	5:24	12:01	17:04	23:20
			−0.8	7.0	2.9	10.3
●	F	14	6:11	12:52	17:52	. . .
			−1.7	7.0	3.1	. . .
N	S	15	0:02	7:00	13:40	18:40
			10.7	−2.1	7.0	3.0
P	S	16	0:50	7:46	14:29	19:30
			10.8	−2.3	7.2	2.9
	M	17	1:38	8:35	15:16	20:22
			10.6	−2.1	7.3	2.9
	Tu	18	2:27	9:24	16:04	21:21
			10.1	−1.7	7.5	2.9
	W	19	3:22	10:18	16:52	22:24
			9.5	−1.0	7.9	2.9
	Th	20	4:21	11:02	17:46	23:35
			8.6	−0.2	8.0	2.7
☽ E	F	21	5:32	11:56	18:39	. . .
			7.8	0.7	8.3	. . .
	S	22	0:54	6:52	12:54	19:32
			2.5	7.0	1.5	8.4
	S	23	2:04	8:14	13:51	20:24
			2.1	6.7	2.2	8.7
	M	24	3:14	9:32	14:48	21:14
			1.5	6.4	2.7	9.0
	Tu	25	4:14	10:40	15:38	22:01
			0.7	6.3	3.0	9.3
	W	26	5:07	11:38	16:27	22:44
			0.1	6.4	3.4	9.5
	Th	27	5:51	12:28	17:13	23:21
			−0.3	6.5	3.6	9.7
S	F	28	6:31	13:10	17:54	. . .
			−0.6	6.3	3.8	. . .
○	S	29	0:01	7:08	13:49	18:32
			9.7	−0.8	6.6	4.1
	S	30	0:40	7:40	14:26	19:12
			9.6	−0.8	6.8	3.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region and which is 4.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.							AUGUST.							SEPTEMBER.						
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	1:18	8:12	14:58	19:51		Th	1	2:13	8:42	15:10	20:58		S	1	3:10	9:10	15:24	21:45
			9.3	−0.7	7.0	8.6				8.7	0.0	7.9	2.3				8.0	1.4	8.9	0.5
	Tu	2	1:53	8:42	15:26	20:32	E	F	2	2:52	9:14	15:40	21:33		M	2	3:55	9:42	16:00	22:33
			9.0	−0.4	7.0	8.5				8.3	0.4	8.2	2.1				7.2	2.1	9.0	0.7
	W	3	2:28	9:15	15:54	21:16		S	3	3:31	9:48	16:09	22:20		Tu	3	4:48	10:18	16:41	23:35
			8.5	−0.1	7.2	8.4				7.8	1.1	8.4	1.8				6.4	2.7	8.8	0.9
	Th	4	3:06	9:48	16:27	22:02		S	4	4:17	10:21	16:42	23:17	☾	W	4	5:52	11:08	17:36	. . .
			8.1	0.3	7.4	8.3				7.2	1.6	8.5	1.6				5.4	3.5	8.6	. . .
	F	5	3:51	10:22	17:04	22:56	☾	M	5	5:07	10:58	17:25	. . .	N	Th	5	0:52	7:45	12:10	18:50
			7.5	0.8	7.6	8.1				6.5	2.2	8.6	. . .				1.1	5.0	4.2	8.5
E	S	6	4:40	11:08	17:41	23:58		Tu	6	0:08	6:15	11:40	18:19		F	6	2:22	9:46	13:52	20:17
			7.0	1.4	7.9	2.8				1.5	5.7	2.9	8.7				1.0	5.4	4.4	8.6
☾	S	7	5:41	11:48	18:22	. . .		W	7	1:20	7:51	12:40	19:22		S	7	3:43	10:46	15:30	21:37
			6.5	2.0	8.1	. . .				1.3	5.2	3.7	8.8				0.5	6.2	4.3	8.9
	M	8	0:52	6:54	12:34	19:12		Th	8	2:42	9:40	13:57	20:32		S	8	4:43	11:28	16:40	22:43
			2.3	5.9	2.5	8.5				0.9	5.1	4.1	9.1				−0.1	7.2	3.0	9.4
	Tu	9	2:00	8:19	13:30	20:07	N	F	9	3:57	10:55	15:21	21:41	P	M	9	5:30	12:08	17:34	23:42
			1.7	5.6	2.8	8.9				0.2	5.2	4.2	9.5				−0.6	8.0	2.0	10.0
	W	10	3:08	9:46	14:31	21:04		S	10	4:57	11:48	16:37	22:45	●	Tu	10	6:12	12:38	18:23	. . .
			0.9	5.5	3.5	9.4				−0.5	6.1	3.7	10.0				−0.8	8.8	1.0	. . .
	Th	11	4:12	10:59	15:38	22:02	P	S	11	5:48	12:30	17:37	23:43	E	W	11	0:32	6:54	13:10	19:07
			0.1	5.8	3.7	9.9				−1.2	7.0	2.8	10.4				10.2	−0.9	9.5	0.2
N	F	12	5:09	11:56	16:39	22:56	●	M	12	6:35	13:10	18:28	. . .		Th	12	1:20	7:30	13:45	19:52
			−0.8	6.1	3.5	10.4				−1.6	8.0	2.1	. . .				10.2	−0.6	9.9	−0.4
	S	13	6:00	12:45	17:37	23:49		Tu	13	0:36	7:17	13:47	19:20		F	13	2:05	8:07	14:20	20:32
			−1.5	6.6	3.3	10.7				10.7	−1.7	8.6	1.5				9.9	−0.2	9.9	−0.5
●	S	14	6:47	13:30	18:32	. . .		W	14	1:28	7:57	14:28	20:08		S	14	2:48	8:42	14:55	21:15
P			−2.0	7.1	2.8	. . .				10.6	−1.5	9.1	1.0				9.1	0.5	9.9	−0.3
	M	15	0:40	7:34	14:16	19:25	E	Th	15	2:17	8:36	14:57	20:58		S	15	3:35	9:17	15:32	22:13
			10.8	−2.2	7.5	2.5				10.2	−1.0	9.4	0.6				8.1	1.5	9.6	0.2
	Tu	16	1:32	8:20	14:55	20:20		F	16	3:07	9:18	15:34	21:47		M	16	4:33	9:52	16:10	22:57
			10.5	−2.0	8.2	2.2				9.5	−0.3	9.5	0.6				7.0	2.3	9.2	0.7
	W	17	2:25	9:08	15:36	21:13		S	17	3:56	9:57	16:14	22:35	☽	Tu	17	5:25	10:30	16:55	. . .
			10.3	−1.5	8.5	2.0				8.6	0.7	9.3	0.9				6.1	3.2	8.5	. . .
E	Th	18	3:17	9:47	16:17	22:11		S	18	4:50	10:35	16:57	23:34	S	W	18	0:01	6:55	11:17	17:50
			9.6	−0.9	8.7	1.8				7.5	1.6	9.0	1.3				1.4	5.4	4.2	7.9
	F	19	4:13	10:30	17:00	23:12	☽	M	19	5:50	11:16	17:44	. . .		Th	19	1:27	9:00	12:30	19:05
			8.7	0.1	8.8	1.8				6.4	2.6	8.7	. . .				1.8	5.2	4.7	7.4
☽	S	20	5:13	11:20	17:50	. . .		Tu	20	0:46	7:16	12:02	18:40		F	20	3:00	10:18	14:54	20:34
			7.7	1.1	8.7	. . .				1.6	5.6	3.5	8.3				1.8	5.8	4.8	7.2
	S	21	0:13	6:20	12:07	18:38		W	21	2:12	9:06	13:08	19:50	A	S	21	4:04	11:02	16:15	21:50
			1.8	6.9	2.0	8.6				1.7	5.2	4.1	8.0				1.6	6.5	4.2	7.8
	M	22	1:27	7:45	12:58	19:33	S	Th	22	3:37	10:37	14:48	21:02		S	22	4:47	11:33	17:00	22:42
			1.8	6.1	2.8	8.6				1.4	5.6	4.7	7.8				1.3	7.0	3.6	7.7
	Tu	23	2:48	9:13	13:55	20:30		F	23	4:38	11:32	16:10	22:06		M	23	5:20	11:55	17:38	23:25
			1.5	5.7	3.6	8.6				1.0	6.0	4.4	8.1				1.1	7.5	2.9	8.1
	W	24	4:00	10:35	15:00	21:28	A	S	24	5:22	12:09	17:07	22:57		Tu	24	5:45	12:12	18:00	. . .
			1.1	5.5	4.2	8.7				0.7	6.6	4.2	8.3				0.9	8.0	2.1	. . .
S	Th	25	4:56	11:38	16:07	22:20		S	25	5:58	12:38	17:45	23:38		W	25	0:01	6:14	12:31	18:28
			0.6	5.7	4.4	8.9				0.6	7.0	3.6	8.6				8.5	0.8	8.4	1.3
	F	26	5:43	12:25	17:02	23:05		M	26	6:25	13:02	18:20	. . .	E	Th	26	0:35	6:42	12:56	18:58
			0.1	6.2	4.5	9.0				0.2	7.4	3.0	. . .	○			8.6	0.7	8.8	0.7
	S	27	6:19	13:02	17:48	23:47	○	Tu	27	0:17	6:50	13:22	18:50		F	27	1:10	7:08	13:20	19:30
			−0.2	6.6	4.2	9.1				8.8	0.1	7.8	2.5				8.8	0.8	9.1	0.0
♀	S	28	6:50	13:35	18:27	. . .		W	28	0:52	7:15	13:41	19:20		S	28	1:42	7:36	13:45	20:00
A			−0.3	6.8	3.7	. . .				8.9	0.0	8.1	1.9				8.6	1.1	9.4	−0.4
	M	29	0:27	7:18	14:02	19:08	E	Th	29	1:26	7:40	14:02	19:54		S	29	2:18	8:05	14:13	20:38
			9.2	−0.4	7.2	8.4				8.9	0.1	8.4	1.4				8.3	1.5	9.6	−0.6
	Tu	30	1:03	7:47	14:25	19:40		F	30	1:59	8:13	14:28	20:27		M	30	2:57	8:36	14:45	21:23
			9.1	−0.4	7.4	8.0				8.7	0.5	8.8	1.0				7.7	2.1	9.6	−0.4
	W	31	1:40	8:19	14:47	20:15		S	31	2:35	8:41	14:52	21:05							
			8.9	−0.3	7.6	2.7				8.4	0.9	8.8	0.6							

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	3:42	9:08	15:21	22:14
			6.9	2.6	9.4	−0.1
N	W	2	4:36	9:47	16:06	23:15
			6.1	3.3	9.0	0.4
☾	Th	3	5:53	10:40	17:06	. . .
			5.4	4.2	8.4	. . .
	F	4	0:32	7:53	12:10	18:32
			0.9	5.5	4.5	7.9
	S	5	2:03	9:27	14:08	20:14
			1.1	6.0	4.3	7.9
	S	6	3:22	10:15	15:40	21:37
			0.8	7.0	3.4	8.2
P	M	7	4:30	10:53	16:40	22:42
			0.5	8.0	2.2	8.8
	Tu	8	5:05	11:20	17:27	23:37
			0.3	8.8	1.0	9.3
E	W	9	5:47	12:00	18:10	. . .
			0.2	9.4	0.0	. . .
●	Th	10	0:23	6:25	12:36	18:48
			9.6	0.2	10.0	−0.8
	F	11	1:08	6:59	13:09	19:27
			9.5	0.5	10.4	−1.2
	S	12	1:51	7:32	13:42	20:10
			9.0	1.0	10.5	−1.2
	S	13	2:33	8:05	14:17	20:51
			8.3	1.6	10.3	−0.9
	M	14	3:17	8:38	14:51	21:35
			7.5	2.2	9.8	−0.3
S	Tu	15	4:06	9:15	15:30	22:33
			6.7	2.9	9.1	0.4
	W	16	5:02	9:54	16:10	23:18
			5.9	3.7	8.3	1.1
☽	Th	17	6:24	10:49	17:05	. . .
			5.5	4.5	7.5	. . .
	F	18	0:27	8:13	12:20	18:24
			1.7	5.6	4.5	6.8
A	S	19	1:48	9:25	14:43	20:02
			2.0	6.3	4.2	6.5
	S	20	3:00	10:05	15:55	21:23
			2.1	6.8	4.0	6.7
	M	21	3:48	10:32	16:38	22:20
			2.0	7.2	3.1	7.1
	Tu	22	4:25	10:55	17:03	23:08
			1.9	7.8	2.2	7.5
E	W	23	5:00	11:18	17:30	23:42
			1.8	8.2	1.3	8.0
	Th	24	5:31	11:43	17:57	. . .
			1.6	8.8	0.4	. . .
○	F	25	0:17	6:00	12:10	18:29
			8.2	1.6	9.4	−0.4
	S	26	0:58	6:30	12:37	19:04
			8.2	1.7	9.9	−1.1
	S	27	1:30	7:01	13:08	19:43
			8.0	1.8	10.2	−1.4
	M	28	2:09	7:34	13:42	20:24
			7.7	2.3	10.2	−1.4
	Tu	29	2:52	8:10	14:18	21:10
			7.3	2.7	10.1	−1.1
N	W	30	3:42	8:50	15:00	22:12
			6.7	3.1	9.6	−0.6
	Th	31	4:40	9:38	15:50	23:02
			6.2	3.6	8.9	0.0
NOVEMBER.						
☾	F	1	5:58	10:50	16:57	. . .
			5.9	4.4	8.1	. . .
	S	2	0:18	7:27	12:29	18:28
			0.7	6.5	4.2	7.5
P	S	3	0:38	8:38	14:18	20:12
			1.0	7.0	3.6	7.4
	M	4	2:45	9:30	15:35	21:38
			1.3	7.7	2.5	7.7
E	Tu	5	3:43	10:10	16:37	22:38
			1.4	8.4	1.3	8.1
	W	6	4:35	10:48	17:10	23:30
			1.3	9.1	0.3	8.5
	Th	7	5:15	11:24	17:53	. . .
			1.4	9.8	−0.7	. . .
●	F	8	0:15	5:51	12:00	18:34
			8.5	1.6	10.3	−1.3
	S	9	1:00	6:25	12:34	19:14
			8.3	1.8	10.6	−1.5
	S	10	1:42	6:59	13:09	19:54
			8.0	2.2	10.6	−1.5
	M	11	2:23	7:35	13:44	20:32
			7.5	2.5	10.3	−1.2
S	Tu	12	3:08	8:10	14:20	21:12
			7.1	3.0	10.7	−0.6
	W	13	3:52	8:48	14:57	21:55
			6.6	3.4	9.0	0.0
	Th	14	4:41	9:32	15:38	22:45
			6.2	4.2	8.2	0.7
	F	15	5:38	10:28	16:24	23:30
			6.0	4.7	7.4	1.3
A ☽	S	16	6:51	11:52	17:28	. . .
			6.3	4.8	7.3	. . .
	S	17	0:28	7:59	13:48	19:00
			1.9	6.5	4.4	6.2
	M	18	1:30	8:44	14:58	20:30
			2.3	7.0	3.7	6.0
E	Tu	19	2:32	9:20	15:45	21:38
			2.5	7.4	2.8	6.3
	W	20	3:25	9:51	16:17	22:30
			2.5	7.9	1.9	6.8
	Th	21	4:03	10:20	16:53	23:17
			2.5	8.6	0.5	7.1
	F	22	4:41	10:55	17:31	23:59
			2.5	9.3	−0.1	7.3
	S	23	5:19	11:30	18:10	. . .
			2.5	9.9	−1.1	. . .
○	S	24	0:42	5:57	12:05	18:50
			7.5	2.5	10.5	−1.7
	M	25	1:24	6:34	12:48	19:32
			7.5	2.6	10.6	−2.0
N	Tu	26	2:08	7:15	13:23	20:18
			7.1	2.7	10.6	−2.0
	W	27	2:54	7:58	14:06	21:04
			6.9	2.9	10.3	−1.7
P	Th	28	3:45	9:47	14:55	21:55
			7.1	3.8	9.7	−1.0
	F	29	4:40	9:46	15:50	22:50
			7.0	3.5	8.9	−0.3
	S	30	5:40	11:00	16:57	23:50
			7.0	3.5	8.0	0.5
DECEMBER.						
☾	S	1	6:44	12:27	18:22	. . .
			7.3	3.4	7.3	. . .
E	M	2	0:58	7:46	14:00	19:57
			1.3	7.8	2.8	6.9
	Tu	3	2:08	8:42	15:06	21:18
			1.8	8.2	2.0	7.0
	W	4	3:05	9:28	16:08	22:26
			2.1	8.8	1.0	7.2
	Th	5	3:56	10:12	16:58	23:23
			2.4	9.4	0.0	7.2
	F	6	4:40	10:51	17:44	. . .
			2.6	9.8	−0.8	. . .
	S	7	0:12	5:20	11:30	18:26
			7.2	2.8	10.2	−1.2
●	S	8	0:57	5:56	12:07	19:04
			7.5	3.0	10.4	−1.5
S	M	9	1:39	6:37	12:45	19:42
			7.8	3.0	10.3	−1.4
	Tu	10	2:22	7:15	13:22	20:17
			7.8	3.1	10.0	−1.1
	W	11	3:00	7:55	14:00	20:53
			7.0	3.4	9.6	−0.7
	Th	12	3:40	8:33	14:37	21:28
			6.9	3.6	8.9	−0.3
A	F	13	4:13	9:18	15:15	22:05
			6.9	3.7	8.2	0.3
	S	14	4:53	10:10	15:57	22:42
			6.8	4.0	7.7	1.0
	S	15	5:37	11:14	16:48	23:25
			6.9	4.0	6.8	1.5
☽	M	16	6:28	12:21	17:52	. . .
			7.1	3.8	6.1	. . .
E	Tu	17	0:17	7:10	13:35	19:17
			2.1	7.4	3.3	5.8
	W	18	1:09	7:53	14:32	20:39
			2.6	7.7	2.6	5.7
	Th	19	2:08	8:38	15:30	21:55
			2.9	8.2	1.7	5.9
	F	20	2:58	9:25	16:22	22:56
			3.1	8.8	0.7	6.2
	S	21	3:52	10:10	17:10	23:50
			3.2	9.5	−0.4	6.3
	S	22	4:43	10:55	17:55	. . .
			3.2	10.1	−1.2	. . .
N ○	M	23	0:37	5:32	11:42	18:40
			6.6	3.1	10.5	−1.9
	Tu	24	1:23	6:20	12:30	19:24
			6.8	3.0	10.7	−2.2
P	W	25	2:07	7:08	13:17	20:10
			7.1	2.8	10.7	−2.2
	Th	26	2:50	7:57	14:04	20:55
			7.4	2.7	10.4	−2.0
	F	27	3:33	8:50	14:55	21:41
			7.8	2.7	9.8	−1.3
	S	28	4:18	9:48	15:50	22:30
			7.8	2.6	9.0	−0.9
E	S	29	5:07	10:53	16:53	23:20
			8.1	2.5	8.1	0.5
☾	M	30	5:57	12:07	18:05	. . .
			8.3	2.4	7.1	. . .
	T	31	0:14	6:51	13:20	19:28
			1.5	8.4	2.2	7.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 4.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	7:35	17:15	. . . . .	. . . . .	. . . . .
			−0.1	3.9	. . . . .	. . . . .	. . . . .
	Tu	2	5:21	17:57	. . . . .	. . . . .	. . . . .
			−0.4	4.4	. . . . .	. . . . .	. . . . .
N	W	3	4:38	18:40	. . . . .	. . . . .	. . . . .
			−0.9	4.7	. . . . .	. . . . .	. . . . .
♀ P	Th	4	5:00	19:27	. . . . .	. . . . .	. . . . .
			−1.2	5.0	. . . . .	. . . . .	. . . . .
	F	5	5:31	20:18	. . . . .	. . . . .	. . . . .
			−1.4	5.0	. . . . .	. . . . .	. . . . .
	S	6	6:02	21:07	. . . . .	. . . . .	. . . . .
			−1.5	4.8	. . . . .	. . . . .	. . . . .
	S	7	6:30	21:50	. . . . .	. . . . .	. . . . .
			−1.4	4.5	. . . . .	. . . . .	. . . . .
	M	8	6:55	22:44	. . . . .	. . . . .	. . . . .
			−1.2	4.0	. . . . .	. . . . .	. . . . .
E	Tu	9	7:16	23:32	. . . . .	. . . . .	. . . . .
			−0.9	3.3	. . . . .	. . . . .	. . . . .
☾	W	10	7:29	15:25	17:52	. . .	. . .
			−0.7	1.8	1.7	. . .	. . .
	Th	11	0:16	7:41	15:30	20:50	. . .
			2.6	−0.4	2.3	1.7	. . .
	F	12	1:00	7:53	16:00	. . .	. . .
			1.9	−0.2	2.8	. . .	. . .
	S	13	0:40	1:45	8:08	16:35	. . .
			1.2	1.3	−0.1	3.3	. . .
	S	14	8:07	17:13	. . . . .	. . . . .	. . . . .
			−0.1	3.6	. . . . .	. . . . .	. . . . .
	M	15	7:23	17:50	. . . . .	. . . . .	. . . . .
			−0.1	3.9	. . . . .	. . . . .	. . . . .
	Tu	16	3:55	18:25	. . . . .	. . . . .	. . . . .
			−0.5	4.0	. . . . .	. . . . .	. . . . .
S A	W	17	4:26	19:02	. . . . .	. . . . .	. . . . .
			−0.8	4.1	. . . . .	. . . . .	. . . . .
	Th	18	5:00	19:37	. . . . .	. . . . .	. . . . .
			−1.0	4.1	. . . . .	. . . . .	. . . . .
●	F	19	5:31	20:11	. . . . .	. . . . .	. . . . .
			−1.1	4.0	. . . . .	. . . . .	. . . . .
	S	20	6:02	20:44	. . . . .	. . . . .	. . . . .
			−1.1	3.9	. . . . .	. . . . .	. . . . .
	S	21	6:30	21:16	. . . . .	. . . . .	. . . . .
			−1.0	3.7	. . . . .	. . . . .	. . . . .
	M	22	6:53	21:48	. . . . .	. . . . .	. . . . .
			−0.8	3.4	. . . . .	. . . . .	. . . . .
	Tu	23	7:00	22:22	. . . . .	. . . . .	. . . . .
			−0.5	3.1	. . . . .	. . . . .	. . . . .
E	W	24	6:44	22:55	. . . . .	. . . . .	. . . . .
			−0.3	2.6	. . . . .	. . . . .	. . . . .
	Th	25	6:33	14:15	17:36	23:23	. . .
			−0.1	1.7	1.5	2.1	. . .
	F	26	6:35	14:13	19:29	22:57	. . .
			0.0	2.2	1.4	1.5	. . .
☽	S	27	6:41	14:32	. . . . .	. . . . .	. . . . .
			0.1	2.7	. . . . .	. . . . .	. . . . .
	S	28	6:37	15:02	. . . . .	. . . . .	. . . . .
			0.0	3.2	. . . . .	. . . . .	. . . . .
	M	29	6:30	15:45	. . . . .	. . . . .	. . . . .
			−0.1	3.8	. . . . .	. . . . .	. . . . .
N	Tu	30	6:13	16:32	. . . . .	. . . . .	. . . . .
			−0.3	4.2	. . . . .	. . . . .	. . . . .
	W	31	3:43	17:22	. . . . .	. . . . .	. . . . .
			−0.7	4.5	. . . . .	. . . . .	. . . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
P	Th	1	4:08	18:25	. . . . .	. . . . .	. . . . .
			−1.0	4.6	. . . . .	. . . . .	. . . . .
○	F	2	4:35	19:10	. . . . .	. . . . .	. . . . .
			−1.1	4.6	. . . . .	. . . . .	. . . . .
	S	3	5:05	20:05	. . . . .	. . . . .	. . . . .
			−1.1	4.4	. . . . .	. . . . .	. . . . .
	S	4	5:29	20:55	. . . . .	. . . . .	. . . . .
			−1.0	4.1	. . . . .	. . . . .	. . . . .
	M	5	5:48	21:52	. . . . .	. . . . .	. . . . .
			−0.8	3.6	. . . . .	. . . . .	. . . . .
E	Tu	6	6:04	12:50	15:26	22:42	. . .
			−0.5	1.3	1.2	3.1	. . .
	W	7	6:12	13:03	17:15	23:30	. . .
			−0.3	1.9	1.3	2.4	. . .
	Th	8	6:22	13:35	19:15	. . .	. . .
			−0.1	2.4	1.3	. . .	. . .
☾	F	9	0:20	6:35	14:13	22:03	. . .
			1.8	0.0	2.8	1.0	. . .
	S	10	1:08	6:47	14:52	23:55	. . .
			1.2	0.0	3.2	0.6	. . .
	S	11	2:00	6:57	15:32	. . .	. . .
			0.7	0.1	3.5	. . .	. . .
	M	12	1:21	3:05	6:15	16:15	. . .
			0.2	0.3	0.1	3.6	. . .
S	Tu	13	2:15	16:55	. . . . .	. . . . .	. . . . .
			−0.2	3.7	. . . . .	. . . . .	. . . . .
A	W	14	3:07	17:39	. . . . .	. . . . .	. . . . .
			−0.5	3.7	. . . . .	. . . . .	. . . . .
	Th	15	3:44	18:19	. . . . .	. . . . .	. . . . .
			−0.6	3.7	. . . . .	. . . . .	. . . . .
	F	16	4:19	19:00	. . . . .	. . . . .	. . . . .
			−0.7	3.6	. . . . .	. . . . .	. . . . .
●	S	17	4:50	19:40	. . . . .	. . . . .	. . . . .
			−0.7	3.4	. . . . .	. . . . .	. . . . .
	S	18	5:20	20:22	. . . . .	. . . . .	. . . . .
			−0.6	3.3	. . . . .	. . . . .	. . . . .
	M	19	5:48	21:00	. . . . .	. . . . .	. . . . .
			−0.4	3.0	. . . . .	. . . . .	. . . . .
E	Tu	20	5:52	21:49	. . . . .	. . . . .	. . . . .
			−0.1	2.7	. . . . .	. . . . .	. . . . .
	W	21	5:26	12:15	15:48	22:32	. . .
			0.2	1.5	1.2	2.3	. . .
	Th	22	5:13	12:07	17:15	23:19	. . .
			0.4	1.9	1.1	1.8	. . .
	F	23	5:14	12:25	18:43	. . .	. . .
			0.4	2.4	0.9	. . .	. . .
	S	24	0:07	5:18	12:54	20:25	. . .
			1.3	0.4	2.9	0.6	. . .
☽	S	25	0:57	5:14	13:29	23:26	. . .
			0.8	0.3	3.4	0.2	. . .
	M	26	2:00	5:08	14:10	. . .	. . .
			0.3	0.2	3.8	. . .	. . .
N	Tu	27	0:55	14:58	. . . . .	. . . . .	. . . . .
			−0.1	4.0	. . . . .	. . . . .	. . . . .
	W	28	1:51	15:53	. . . . .	. . . . .	. . . . .
			−0.5	4.2	. . . . .	. . . . .	. . . . .
P	Th	29	2:38	16:15	. . . . .	. . . . .	. . . . .
			−0.6	4.2	. . . . .	. . . . .	. . . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	F	1	3:16	17:58	. . . . .	. . . . .	. . . . .
			−0.7	4.0	. . . . .	. . . . .	. . . . .
○	S	2	3:46	18:55	. . . . .	. . . . .	. . . . .
			−0.6	3.7	. . . . .	. . . . .	. . . . .
	S	3	4:10	19:56	. . . . .	. . . . .	. . . . .
			−0.4	3.4	. . . . .	. . . . .	. . . . .
E	M	4	4:26	10:36	13:19	20:50	. . .
			−0.2	1.1	1.0	3.0	. . .
	Tu	5	4:32	10:45	15:10	21:53	. . .
			0.0	1.7	1.0	2.5	. . .
	W	6	4:37	11:12	16:58	22:48	. . .
			0.2	2.1	0.9	2.0	. . .
	Th	7	4:48	11:48	18:34	23:42	. . .
			0.3	2.6	0.7	1.5	. . .
	F	8	5:03	12:26	20:12	. . .	. . .
			0.4	3.0	0.5	. . .	. . .
	S	9	0:35	5:20	13:05	21:40	. . .
			1.1	0.4	3.4	0.3	. . .
☾	S	10	1:36	5:28	13:46	23:00	. . .
			0.7	0.4	3.3	0.1	. . .
S	M	11	2:55	5:07	14:27	. . .	. . .
			0.5	0.4	3.5	. . .	. . .
A	Tu	12	0:10	15:08	. . . . .	. . . . .	. . . . .
			−0.1	3.5	. . . . .	. . . . .	. . . . .
	W	13	1:08	15:52	. . . . .	. . . . .	. . . . .
			−0.3	3.4	. . . . .	. . . . .	. . . . .
	Th	14	1:56	16:36	. . . . .	. . . . .	. . . . .
			−0.3	3.2	. . . . .	. . . . .	. . . . .
	F	15	2:38	17:24	. . . . .	. . . . .	. . . . .
			−0.3	3.0	. . . . .	. . . . .	. . . . .
	S	16	3:16	18:16	. . . . .	. . . . .	. . . . .
			−0.2	2.8	. . . . .	. . . . .	. . . . .
	S	17	3:45	19:10	. . . . .	. . . . .	. . . . .
			−0.1	2.6	. . . . .	. . . . .	. . . . .
● E	M	18	4:05	20:06	. . . . .	. . . . .	. . . . .
			0.2	2.4	. . . . .	. . . . .	. . . . .
	Tu	19	3:56	10:13	14:16	21:06	. . .
			0.5	1.5	1.2	2.1	. . .
	W	20	3:25	10:10	15:48	22:04	. . .
			0.7	1.5	0.9	1.8	. . .
	Th	21	3:25	10:24	17:05	23:04	. . .
			0.8	2.3	0.6	1.4	. . .
	F	22	3:32	10:48	18:17	. . .	. . .
			0.8	2.8	0.2	. . .	. . .
	S	23	0:06	3:32	11:18	19:25	. . .
			1.0	0.8	3.3	0.0	. . .
	S	24	11:56	20:51	. . . . .	. . . . .	. . . . .
			3.7	−0.3	. . . . .	. . . . .	. . . . .
N ☽	M	25	12:37	22:15	. . . . .	. . . . .	. . . . .
			4.0	−0.5	. . . . .	. . . . .	. . . . .
	Tu	26	13:25	23:24	. . . . .	. . . . .	. . . . .
			4.1	−0.6	. . . . .	. . . . .	. . . . .
	W	27	14:16	. . . . .	. . . . .	. . . . .	. . . . .
			4.0	. . . . .	. . . . .	. . . . .	. . . . .
P	Th	28	0:25	15:13	. . . . .	. . . . .	. . . . .
			−0.6	3.8	. . . . .	. . . . .	. . . . .
	F	29	1:15	16:17	. . . . .	. . . . .	. . . . .
			−0.5	3.5	. . . . .	. . . . .	. . . . .
	S	30	1:53	17:28	. . . . .	. . . . .	. . . . .
			−0.3	3.1	. . . . .	. . . . .	. . . . .
E	S	31	2:18	18:40	. . . . .	. . . . .	. . . . .
			0.0	2.6	. . . . .	. . . . .	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 165th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	M	1	2:28 0.3	8:45 1.7	13:14 1.1	19:50 2.2
	Tu	2	2:28 0.5	9:08 2.2	15:30 0.8	21:04 1.8
	W	3	2:35 0.6	9:38 2.7	17:04 0.4	22:12 1.4
	Th	4	2:50 0.6	10:15 3.1	18:13 0.1	23:18 1.1
	F	5	3:07 0.7	10:50 3.4	19:15 —0.2	. . . .
	S	6	0:30 0.8	3:21 0.7	11:28 3.6	20:15 —0.3
S	S	7	12:06 3.7	21:12 —0.4	. . . .	. . . .
	M	8	12:42 3.7	22:10 —0.4	. . . .	. . . .
☾ A	Tu	9	13:20 3.5	23:00 —0.4	. . . .	. . . .
	W	10	13:56 3.3	23:46 —0.3	. . . .	. . . .
	Th	11	14:32 3.0	. . . .	. . . .	. . . .
	F	12	0:28 —0.2	15:12 2.8	. . . .	. . . .
	S	13	1:00 0.0	16:00 2.4	. . . .	. . . .
	S	14	1:10 0.2	17:13 2.1	. . . .	. . . .
E	M	15	0:46 0.5	8:42 1.7	12:34 1.5	18:34 1.7
	Tu	16	0:46 1.6	8:20 2.0	15:48 1.0	19:56 1.4
●	W	17	0:55 0.8	8:30 2.5	16:35 0.5	21:26 1.1
	Th	18	1:02 0.9	8:50 2.9	17:17 0.0	. . . .
	F	19	9:20 3.5	18:05 —0.4	. . . .	. . . .
	S	20	9:54 3.9	18:58 —0.7	. . . .	. . . .
N	S	21	10:33 4.2	19:45 —0.9	. . . .	. . . .
P	M	22	11:15 4.4	20:38 —1.0	. . . .	. . . .
☽	Tu	23	12:00 4.3	21:32 —1.0	. . . .	. . . .
	W	24	12:46 4.2	22:18 —0.8	. . . .	. . . .
	Th	25	13:40 3.8	23:00 —0.6	. . . .	. . . .
	F	26	14:36 3.2	23:26 —0.3	. . . .	. . . .
	S	27	15:42 2.7	23:40 0.0	. . . .	. . . .
E	S	28	7:24 1.7	10:36 1.5	17:00 2.0	23:52 0.3
	M	29	7:25 2.2	14:43 1.1	18:27 1.5	. . . .
○	Tu	30	0:05 0.5	7:50 2.7	15:57 0.6	20:05 1.0

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	W	1	0:17 0.6	8:20 3.2	16:55 0.0	21:48 0.7
	Th	2	0:28 0.6	8:55 3.6	17:45 —0.4	. . . .
	F	3	9:30 3.9	18:33 —0.7	. . . .	. . . .
	S	4	10:07 4.1	19:20 —0.8	. . . .	. . . .
S	S	5	10:40 4.1	20:04 —0.9	. . . .	. . . .
	M	6	11:13 4.0	20:42 —0.9	. . . .	. . . .
A	Tu	7	11:44 3.8	21:20 —0.8	. . . .	. . . .
☾	W	8	12:10 3.5	21:50 —0.7	. . . .	. . . .
	Th	9	12:35 3.2	22:10 —0.4	. . . .	. . . .
	F	10	12:44 2.8	22:10 —0.2	. . . .	. . . .
	S	11	12:15 2.5	22:13 0.0	. . . .	. . . .
E	S	12	12:00 2.0	22:18 0.2	. . . .	. . . .
	M	13	7:00 2.1	22:30 0.4	. . . .	. . . .
	Tu	14	6:48 2.5	22:30 0.5	. . . .	. . . .
	W	15	7:00 2.9	16:32 0.3	. . . .	. . . .
●	Th	16	7:28 3.5	17:02 —0.3	. . . .	. . . .
	F	17	8:08 4.0	16:55 —0.7	. . . .	. . . .
	S	18	8:38 4.4	18:16 —1.2	. . . .	. . . .
N P	S	19	9:20 4.7	18:54 —1.4	. . . .	. . . .
	M	20	10:05 4.8	19:36 —1.5	. . . .	. . . .
	Tu	21	10:48 4.7	20:20 —1.4	. . . .	. . . .
	W	22	11:35 4.4	20:50 —1.2	. . . .	. . . .
☽	Th	23	12:20 3.9	21:20 —0.9	. . . .	. . . .
	F	24	13:12 3.3	21:38 —0.6	. . . .	. . . .
E	S	25	14:03 2.6	21:50 —0.2	. . . .	. . . .
	S	26	15:00 2.2	22:04 0.0	. . . .	. . . .
	M	27	6:13 2.6	14:34 1.0	16:24 1.1	22:15 0.2
	Tu	28	6:40 3.1	15:35 0.4	18:15 0.5	22:18 0.3
	W	29	7:10 3.6	16:25 —0.2	. . . .	. . . .
○	Th	30	7:45 4.0	17:10 —0.6	. . . .	. . . .
	F	31	8:20 4.2	17:50 —1.0	. . . .	. . . .

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	8:55 4.3	18:30 —1.1	. . . .	. . . .
	S	2	9:28 4.3	19:08 —1.2	. . . .	. . . .
	M	3	10:00 4.2	19:43 —1.2	. . . .	. . . .
A	Tu	4	10:30 4.0	20:12 —1.1	. . . .	. . . .
	W	5	10:55 3.8	20:34 —0.9	. . . .	. . . .
	Th	6	11:16 3.4	20:45 —0.7	. . . .	. . . .
☾	F	7	11:28 3.0	20:35 —0.5	. . . .	. . . .
E	S	8	11:02 2.7	20:36 —0.3	. . . .	. . . .
	S	9	10:48 2.2	20:45 —0.1	. . . .	. . . .
	M	10	5:30 2.3	20:50 0.1	. . . .	. . . .
	Tu	11	5:26 2.7	20:46 0.1	. . . .	. . . .
	W	12	5:43 3.2	20:17 0.0	. . . .	. . . .
	Th	13	6:13 3.8	16:37 —0.4	. . . .	. . . .
●	F	14	6:47 4.3	17:00 —0.9	. . . .	. . . .
N	S	15	7:28 4.7	17:33 —1.3	. . . .	. . . .
P	S	16	8:10 4.9	18:07 —1.5	. . . .	. . . .
	M	17	8:56 5.0	18:40 —1.6	. . . .	. . . .
	Tu	18	9:43 4.9	19:13 —1.5	. . . .	. . . .
	W	19	10:30 4.5	19:43 —1.3	. . . .	. . . .
	Th	20	11:20 4.0	20:04 —1.0	. . . .	. . . .
☽ E	F	21	12:07 3.4	20:20 —0.7	. . . .	. . . .
	S	22	12:52 2.6	20:30 —0.4	. . . .	. . . .
	S	23	4:33 2.3	10:15 1.8	13:36 1.9	20:44 —0.2
	M	24	4:57 2.8	13:47 1.1	14:23 1.3	20:58 —0.1
	Tu	25	5:26 3.4	15:07 0.4	. . . .	. . . .
	W	26	6:00 3.7	15:45 —0.2	. . . .	. . . .
	Th	27	6:38 4.1	16:26 —0.6	. . . .	. . . .
S	F	28	7:14 4.3	17:08 —1.0	. . . .	. . . .
○	S	29	7:50 4.4	17:38 —1.2	. . . .	. . . .
	S	30	8:26 4.4	18:13 —1.3	. . . .	. . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 165th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	9:00 4.2	18:44 −1.2		
	Tu	2	9:29 4.0	19:14 −1.1		
	W	3	9:58 3.8	19:36 −1.0		
	Th	4	10:24 3.4	19:45 −0.7		
	F	5	10:44 3.1	19:34 −0.4		
E	S	6	10:45 2.6	19:26 −0.2		
☾	S	7	3:51 1.9	6:55 1.8	10:14 2.2	19:28 −0.1
	M	8	3:47 2.2	8:50 1.8	9:48 1.9	19:33 0.0
	Tu	9	3:54 2.7	19:30 0.0		
	W	10	4:15 3.2	19:15 −0.2		
	Th	11	4:50 3.8	18:44 −0.4		
N	F	12	5:28 4.2	16:25 −0.8		
	S	13	6:14 4.6	16:47 −1.1		
● P	S	14	7:00 4.8	17:16 −1.3		
	M	15	7:51 4.9	17:45 −1.4		
	Tu	16	8:42 4.7	18:14 −1.3		
	W	17	9:32 4.4	18:35 −1.1		
E	Th	18	10:15 3.9	18:53 −0.8		
	F	19	11:11 3.3	19:02 −0.6		
☽	S	20	2:23 1.7	5:32 1.5	12:00 2.6	19:15 −0.3
	S	21	2:45 2.3	7:53 1.5	12:50 1.9	19:29 −0.2
	M	22	3:20 2.8	11:36 1.1	18:38 1.2	19:42 −0.1
	Tu	23	3:56 3.2	13:23 0.5	14:30 0.6	19:47 0.0
	W	24	4:38 3.6	14:34 0.0	16:09 0.1	19:25 −0.1
S	Th	25	5:21 3.9	15:22 −0.4		
	F	26	6:00 4.1	16:00 −0.8		
	S	27	6:43 4.1	16:35 −1.0		
○ A	S	28	7:21 4.1	17:09 −1.0		
	M	29	7:56 3.9	17:41 −1.0		
	Tu	30	8:32 3.8	18:11 −0.9		
	W	31	9:06 3.5	18:35 −0.7		

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	9:38 3.2	18:45 −0.4		
E	F	2	10:12 2.9	18:26 −0.1		
	S	3	10:46 2.4	18:15 0.0		
	S	4	1:50 1.8	5:27 1.5	11:17 2.0	18:14 0.2
☾	M	5	1:51 2.2	7:24 1.4	10:10 1.5	18:15 0.2
	Tu	6	2:08 2.7	18:10 0.1		
	W	7	2:37 3.2	18:00 0.0		
	Th	8	3:26 3.7	17:54 −0.3		
N	F	9	4:02 4.0	15:18 −0.6		
	S	10	4:58 4.3	15:45 −0.8		
P	S	11	5:44 4.4	16:13 −1.0		
●	M	12	6:38 4.4	16:41 −0.9		
	Tu	13	7:36 4.3	17:04 −0.8		
	W	14	8:35 4.0	17:24 −0.6		
E	Th	15	9:27 3.5	17:38 −0.3	23:54 1.3	
	F	16	3:14 1.1	10:24 3.0	17:40 −0.1	
	S	17	0:15 1.9	4:57 1.1	11:15 2.4	17:51 0.0
	S	18	0:58 2.4	6:58 1.0	12:05 1.8	18:05 0.1
☽	M	19	1:31 2.9	9:12 0.8	13:00 1.2	18:22 0.1
	Tu	20	2:14 3.2	11:05 0.5	14:00 0.7	18:35 0.1
	W	21	2:58 3.5	12:27 0.1	15:17 0.2	18:25 0.1
S	Th	22	3:43 3.7	13:35 −0.2		
	F	23	4:30 3.7	14:27 −0.4		
A	S	24	5:27 3.7	15:10 −0.6		
	S	25	6:00 3.6	15:48 −0.6		
	M	26	6:45 3.4	16:22 −0.6		
○	Tu	27	7:28 3.2	16:58 −0.4		
	W	28	8:10 3.0	17:15 −0.2		
E	Th	29	9:56 2.7	17:25 0.1	23:59 1.4	
	F	30	2:24 1.3	9:39 2.4	16:36 0.4	23:37 1.6
	S	31	4:00 1.2	10:25 2.0	16:45 0.5	23:50 2.0

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	5:20 1.0	11:10 1.6	16:43 0.6	23:56 2.4
	M	2	6:44 0.8	12:00 1.2	16:40 0.6	
	Tu	3	0:24 2.9	8:35 0.5	12:57 0.7	16:39 0.4
☾	W	4	0:56 3.3	10:58 0.2	14:00 0.3	16:19 0.2
N	Th	5	1:40 3.7	12:15 −0.2		
	F	6	2:24 3.9	13:13 −0.4		
	S	7	3:15 4.0	14:02 −0.6		
	S	8	4:14 4.0	14:40 −0.6		
P	M	9	5:15 3.8	15:12 −0.5		
●	Tu	10	6:22 3.6	15:35 −0.3		
E	W	11	7:26 3.2	15:46 0.0	21:36 1.2	
	Th	12	1:05 0.9	8:30 2.8	15:47 0.2	21:56 1.7
	F	13	2:57 0.8	9:32 2.4	15:55 0.4	22:30 2.3
	S	14	4:35 0.7	10:31 1.9	16:08 0.4	23:06 2.8
	S	15	6:14 0.4	11:31 1.4	16:27 0.5	23:47 3.1
	M	16	7:44 0.2	12:27 1.0	16:46 0.5	
☽	Tu	17	0:28 3.4	9:05 0.0	13:36 0.7	17:00 0.5
S	W	18	1:15 3.6	10:24 −0.1		
	Th	19	2:00 3.6	11:31 −0.3		
	F	20	2:42 3.5	12:26 −0.3		
A	S	21	3:29 3.3	13:19 −0.4		
	S	22	4:16 3.1	14:00 −0.3		
	M	23	5:06 2.9	14:38 −0.2		
	Tu	24	6:00 2.6	15:10 0.0		
E	W	25	7:56 2.3	15:27 0.3	22:12 1.6	
○	Th	26	1:18 1.4	8:55 2.0	15:10 0.6	21:45 1.8
	F	27	3:10 1.2	8:56 1.8	14:46 0.7	21:45 2.1
	S	28	4:30 0.8	9:56 1.5	14:46 0.8	22:57 2.5
	S	29	5:32 0.4	10:57 1.2	14:55 0.9	22:20 2.9
	M	30	6:31 0.1	12:07 0.9	14:34 0.8	22:50 3.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 165th meridian W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	7:33 −0.2	23:24 3.7		
N	W	2	8:36 −0.4			
☾	Th	3	0:02 4.0	9:47 −0.6		
	F	4	0:46 4.1	10:49 −0.6		
	S	5	1:35 4.0	11:49 −0.6		
	S	6	2:35 3.8	12:36 −0.4		
P	M	7	3:35 3.4	13:06 −0.2		
	Tu	8	4:50 3.0	13:24 0.1	20:05 1.3	22:39 1.2
E	W	9	6:05 2.5	13:24 0.3	20:01 1.8	
●	Th	10	1:04 1.1	7:20 3.0	13:34 0.5	20:26 2.3
	F	11	3:22 0.7	8:36 1.6	13:47 0.6	21:02 2.8
	S	12	4:47 0.2	9:50 1.2	14:06 0.6	21:39 3.3
	S	13	5:55 −0.1	11:05 0.9	14:25 0.6	22:18 3.6
	M	14	6:56 −0.4	12:33 0.7	14:35 0.6	23:00 3.9
S	Tu	15	7:53 −0.6	23:37 3.9		
	W	16	8:46 −0.6			
☽	Th	17	0:15 3.9	9:40 −0.6		
	F	18	0:56 3.6	10:30 −0.6		
A	S	19	1:33 3.4	11:15 −0.4		
	S	20	2:15 3.0	11:58 −0.3		
	M	21	2:55 2.6	12:25 0.0		
	Tu	22	3:42 2.2	12:35 0.2	20:57 1.9	
E	W	23	3:07 1.8	4:55 1.9	12:07 0.4	20:18 2.0
	Th	24	3:47 1.4	6:20 1.5	12:25 0.6	20:04 2.3
○	F	25	4:25 0.9	7:50 1.1	12:16 0.7	20:16 2.6
	S	26	4:55 0.4	9:31 0.8	12:07 0.7	20:33 3.1
	S	27	5:32 −0.1	21:00 3.7		
	M	28	6:07 −0.5	21:31 4.0		
	Tu	29	6:52 −0.8	22:06 4.2		
N	W	30	7:35 −1.0	22:44 4.4		
	Th	31	8:18 −1.1	23:24 4.4		

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	9:04 −1.1			
P	S	2	0:09 −4.2	9:46 0.9		
	S	3	1:00 3.8	10:19 −0.7		
	M	4	1:52 3.3	10:39 −0.4		
E	Tu	5	2:54 2.6	10:55 0.0	18:52 1.8	22:06 1.6
	W	6	4:14 2.0	11:06 0.2	18:50 2.3	
	Th	7	2:39 1.1	5:44 1.3	11:24 0.4	19:19 2.8
●	F	8	3:43 0.5	7:25 0.9	11:37 0.5	19:50 3.3
	S	9	4:36 −0.1	9:25 0.6	11:44 0.5	20:25 3.8
	S	10	5:27 −0.5	21:02 4.1		
	M	11	6:26 −0.8	21:41 4.3		
S	Tu	12	7:00 −1.0	22:17 4.3		
	W	13	7:43 −1.1	22:53 4.2		
	Th	14	8:20 −1.1	23:27 3.9		
A	F	15	8:52 −1.0	23:56 3.6		
☽	S	16	9:30 −0.8			
	S	17	0:21 3.2	9:50 −0.5		
	M	18	0:25 2.8	9:42 −0.3	23:15 2.4	
E	Tu	19	9:50 0.0	21:47 2.1		
	W	20	9:56 0.1	18:55 2.3		
	Th	21	10:08 0.3	18:48 2.6		
	F	22	10:02 0.3	18:54 3.0		
	S	23	4:40 0.1	19:15 3.5		
○	S	24	5:07 −0.4	19:44 4.0		
	M	25	5:34 −0.8	20:17 4.4		
N	Tu	26	6:05 −1.2	20:56 4.7		
P	W	27	6:43 −1.4	21:36 4.8		
	Th	28	7:20 −1.5	22:19 4.8		
	F	29	7:54 1.4	23:00 4.5		
	S	30	8:26 −1.2	23:49 4.0		

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	8:50 −0.9			
E	M	2	0:35 3.4	9:08 −0.6		
	Tu	3	1:25 2.6	9:16 −0.3	17:32 2.1	
	W	4	0:00 1.8	2:05 1.9	9:31 −0.1	17:41 2.6
	Th	5	2:38 1.1	3:20 1.2	9:42 0.1	18:10 3.1
	F	6	3:28 0.4	5:22 0.5	9:47 0.1	18:48 3.7
	S	7	4:18 −0.2	19:20 4.1		
●	S	8	5:54 −0.7	19:55 4.4		
8	M	9	5:32 −1.0	20:34 4.5		
	Tu	10	6:12 −1.2	21:11 4.5		
	W	11	6:48 −1.3	21:45 4.3		
	Th	12	7:23 −1.3	22:18 4.1		
A	F	13	7:52 −1.2	22:48 3.8		
	S	14	8:15 −1.0	23:12 3.4		
	S	15	8:26 −0.7	23:24 3.0		
☽	M	16	8:19 −0.5	22:31 2.5		
E	Tu	17	8:18 −0.3	18:22 2.1	19:26 2.0	22:01 2.2
	W	18	8:25 −0.1	17:23 2.3		
	Th	19	8:26 0.0	17:15 2.7		
	F	20	8:27 0.0	17:30 3.2		
	S	21	7:43 −0.1	17:55 3.7		
	S	22	4:42 −0.4	18:29 4.2		
N ○	M	23	4:56 −0.9	19:06 4.6		
	Tu	24	5:24 −1.2	19:50 4.8		
P	W	25	5:55 −1.5	20:33 4.9		
	Th	26	6:25 −1.5	21:19 4.8		
	F	27	6:55 −1.5	22:06 4.5		
	S	28	7:21 −1.3	22:54 4.1		
E	S	29	7:37 −1.0	23:45 3.4		
☾	M	30	7:50 −0.7	16:00 1.7	18:35 1.6	
	Tu	31	0:26 2.7	8:00 −0.4	15:51 2.2	20:12 1.7

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The time used is Cosmopolitan Standard, 165th meridian W; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.), and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:08 3.6	7:56 2.3	13:28 4.0	20:43 −0.6
	Tu	2	4:05 4.1	9:04 2.4	14:23 4.2	21:32 −1.2
	W	3	4:55 4.5	9:59 2.4	15:14 4.5	22:22 −1.7
N ○ P	Th	4	5:39 4.8	10:48 2.3	16:03 4.7	23:09 −2.0
	F	5	6:20 5.0	11:32 2.2	16:50 4.9	23:54 −2.1
	S	6	6:59 5.0	12:15 2.0	17:37 5.0	. . . . .
	S	7	0:37 −2.0	7:37 4.9	12:57 1.8	18:25 4.9
	M	8	1:20 −1.5	8:16 4.7	13:43 1.6	19:12 4.5
	Tu	9	2:01 −0.9	8:50 4.5	14:31 1.5	20:04 4.1
E	W	10	2:41 −0.2	9:24 4.3	15:26 1.3	21:04 3.5
☾	Th	11	3:20 0.6	9:59 4.1	16:25 1.1	22:21 3.0
	F	12	4:04 1.4	10:35 4.0	17:34 0.9	. . . . .
	S	13	0:18 2.8	4:56 2.0	11:18 3.8	18:48 0.7
	S	14	2:29 2.9	6:09 2.5	12:13 3.7	19:58 0.3
	M	15	3:52 3.3	7:40 2.8	13:21 3.7	20:54 −0.1
	Tu	16	4:35 3.6	8:55 2.7	14:23 3.9	21:40 −0.4
S	W	17	5:08 3.9	9:50 2.6	15:14 4.1	22:20 −0.7
A	Th	18	5:37 4.1	10:31 2.3	15:59 4.2	22:57 −0.9
●	F	19	6:03 4.3	11:08 2.1	16:38 4.4	23:31 −1.0
	S	20	6:30 4.4	11:43 1.9	17:14 4.5	. . . . .
	S	21	0:05 −1.1	6:56 4.4	12:17 1.7	17:48 4.5
	M	22	0:37 −1.0	7:22 4.5	12:52 1.5	18:22 4.5
	Tu	23	1:08 −0.8	7:47 4.4	13:28 1.4	18:57 4.3
	W	24	1:39 −0.4	8:12 4.4	14:06 1.2	19:34 4.0
E	Th	25	2:10 0.0	8:37 4.3	14:48 1.1	20:19 3.7
	F	26	2:43 0.6	9:01 4.1	15:36 0.9	21:18 3.3
☽	S	27	3:22 1.3	9:28 4.0	16:36 0.7	22:51 3.0
	S	28	4:14 2.0	10:08 3.9	17:50 0.5	. . . . .
	M	29	1:15 3.0	5:40 2.6	10:57 3.8	19:10 0.1
	Tu	30	3:17 3.5	7:30 2.9	12:28 3.8	20:23 −0.5
N	W	31	4:16 4.0	8:58 2.8	13:58 4.0	21:24 −1.1

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:57 4.5	9:55 2.6	15:06 4.4	22:16 −1.5
P	F	2	5:32 4.8	10:40 2.2	16:04 4.7	23:02 −1.8
○	S	3	6:06 4.9	11:21 1.8	16:54 5.0	23:44 −1.8
	S	4	6:37 5.0	12:00 1.4	17:41 5.1	. . . . .
	M	5	0:24 −1.6	7:06 4.9	12:40 1.0	18:27 5.0
E	Tu	6	1:00 −1.2	7:33 4.8	13:20 0.7	19:10 4.7
	W	7	1:35 −0.5	8:00 4.7	14:01 0.5	19:57 4.2
	Th	8	2:07 0.2	8:24 4.5	14:44 0.5	20:45 3.7
	F	9	2:39 1.0	8:48 4.3	15:31 0.5	21:42 3.2
☾	S	10	3:09 1.6	9:09 4.1	16:29 0.6	23:12 2.7
	S	11	3:40 2.3	9:30 3.8	17:42 0.7	. . . . .
	M	12	3:00 2.8	4:35 2.8	10:09 3.6	19:14 0.6
	Tu	13	4:14 3.2	7:02 3.0	12:16 3.4	20:35 0.3
S A	W	14	4:39 3.5	8:59 2.9	14:09 3.5	21:30 0.0
	Th	15	5:00 3.8	9:49 2.5	15:11 3.8	22:10 −0.3
	F	16	5:20 4.0	10:22 2.1	15:59 4.2	22:45 −0.6
	S	17	5:41 4.3	10:56 1.8	16:37 4.4	23:17 −0.8
●	S	18	6:01 4.4	11:27 1.4	17:12 4.6	23:47 −0.9
	M	19	6:22 4.6	11:58 1.1	17:46 4.7	. . . . .
	Tu	20	0:16 −0.8	6:44 4.6	12:30 0.8	18:20 4.7
E	W	21	0:44 −0.5	7:05 4.6	13:02 0.5	18:53 4.5
	Th	22	1:13 −0.1	7:26 4.6	13:36 0.3	19:31 4.3
	F	23	1:43 0.4	7:45 4.5	14:11 0.2	20:15 4.0
	S	24	2:16 1.0	8:05 4.3	14:55 0.2	21:09 3.6
	S	25	2:48 1.7	8:28 4.2	15:49 0.2	22:37 3.1
☽	M	26	3:29 2.4	8:56 4.0	17:06 0.2	. . . . .
	Tu	27	1:29 3.1	4:59 3.0	9:41 3.7	18:40 0.1
N	W	28	3:29 3.6	7:28 3.1	11:46 3.5	20:09 −0.3
	Th	29	4:09 4.1	8:59 2.8	13:58 3.8	21:14 −0.8

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:39 4.4	9:34 2.3	15:12 4.3	22:05 −1.1
	S	2	5:07 4.7	10:28 1.7	16:05 4.7	22:48 −1.3
○	S	3	5:33 4.8	10:04 1.1	16:56 5.0	23:27 −1.2
	M	4	5:58 4.9	11:41 0.5	17:40 5.1	. . . . .
E	Tu	5	0:01 −0.9	6:23 4.9	12:17 0.1	18:22 5.1
	W	6	0:34 −0.4	6:47 4.9	12:52 −0.2	19:08 4.8
	Th	7	1:05 0.2	7:07 4.8	13:28 −0.3	19:48 4.4
	F	8	1:35 0.8	7:29 4.6	14:05 −0.2	20:26 3.9
	S	9	2:08 1.4	7:47 4.4	14:45 0.0	21:13 3.4
	S	10	2:29 1.9	8:04 4.1	15:32 0.3	22:24 2.9
☾	M	11	2:51 2.4	8:20 3.8	16:40 0.7	. . . . .
S	Tu	12	8:40 3.5	18:20 0.9	. . . . .	
A	W	13	4:58 3.2	6:44 3.0	9:12 3.1	20:05 0.7
	Th	14	4:10 3.5	9:01 2.7	14:02 3.3	21:06 0.4
	F	15	4:25 3.8	9:34 2.2	15:07 3.7	21:46 0.1
	S	16	4:42 4.0	10:04 1.7	15:51 4.1	22:19 −0.2
	S	17	5:00 4.3	10:32 1.2	16:29 4.4	22:49 −0.3
	M	18	5:18 4.4	11:02 0.7	17:08 4.6	23:19 −0.3
● E	Tu	19	5:38 4.6	11:32 0.3	17:37 4.8	23:49 −0.2
	W	20	5:58 4.7	12:08 −0.1	18:12 4.8	. . . . .
	Th	21	0:18 0.1	6:19 4.7	12:35 −0.4	18:49 4.8
	F	22	0:50 0.5	6:38 4.6	13:07 −0.6	19:29 4.5
	S	23	1:22 1.0	6:59 4.5	13:45 −0.6	20:16 4.2
	S	24	1:55 1.6	7:20 4.4	14:28 −0.5	21:14 3.7
	M	25	2:31 2.2	7:48 4.2	15:23 −0.2	22:47 3.3
N ☽	Tu	26	3:20 2.8	8:13 3.9	16:41 0.0	. . . . .
	W	27	1:30 3.4	5:14 3.1	9:00 3.5	18:19 0.1
	Th	28	2:56 3.7	7:39 2.9	12:08 3.3	19:51 −0.1
P	F	29	3:33 4.1	8:49 2.4	14:06 3.7	20:55 −0.3
	S	30	4:01 4.3	9:32 1.7	15:16 4.2	21:43 −0.4
	S	31	4:26 4.5	10:08 0.9	16:07 4.6	22:24 −0.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	4:49 4.7	10:43 0.3	16:53 4.9	23:00 −0.2
○	Tu	2	5:13 4.8	11:17 −0.3	17:35 5.0	23.33 0.1
	W	3	5:35 4.9	11:50 −0.7	18:15 4.9	. . . . .
	Th	4	0:05 0.5	5:57 4.8	12:24 −0.9	18:52 4.7
	F	5	0:37 0.9	6:20 4.7	12:56 −0.9	19:30 4.4
	S	6	1:07 1.4	6:41 4.6	13:32 −0.7	20:10 4.0
	S	7	1:36 1.8	7:00 4.3	14:08 −0.3	20:56 3.5
S	M	8	2:05 2.2	7:19 4.1	14:54 0.1	22:01 3.1
	Tu	9	2:38 2.5	7:39 3.7	15:54 0.6	. . . . .
☾ A	W	10	0:20 2.9	3:42 2.8	8:04 3.4	17:19 0.9
	Th	11	2:37 3.2	6:30 2.9	9:00 3.0	19:05 0.9
	F	12	3:06 3.4	8:24 2.4	12:37 3.1	20:15 0.7
	S	13	3:27 3.6	9:00 1.9	14:46 3.5	21:00 0.6
	S	14	3:45 4.0	9:30 1.3	15:34 3.9	21:40 0.4
	M	15	4:05 4.2	10:00 0.7	16:15 4.3	22:13 0.4
E	Tu	16	4:26 4.4	10:32 0.1	16:50 4.6	22:48 0.5
●	W	17	4:48 4.5	11:08 −0.5	17:28 4.8	23:20 0.6
	Th	18	5:10 4.7	11:36 −0.9	18:08 4.09	23:52 0.9
	F	19	5:34 4.7	12:10 −1.2	18:48 4.8	. . . . .
	S	20	0:30 1.3	5:56 4.7	12:48 −1.3	19:35 4.6
	S	21	1:06 1.7	6:24 4.6	13:28 −1.2	20:25 4.3
N	M	22	1:45 2.2	6:52 4.4	14:15 −0.9	21.28 3.9
P	Tu	23	2:32 2.6	7:22 4.2	15:13 −0.5	22:58 3.5
☽	W	24	3:46 2.9	8:08 3.8	16:27 −0.1	. . . . .
	Th	25	0:46 3.7	5:32 2.9	9:28 3.3	17:58 0.2
	F	26	1:53 3.8	7:24 2.4	12:25 3.2	19:18 0.3
	S	27	2:35 4.0	8:25 1.7	14:06 3.5	20:22 0.4
	S	28	3:06 4.2	9:08 1.0	15:13 4.0	21:13 0.5
E	M	29	3:34 4.4	9:48 0.2	16:05 4.3	21:52 0.7
	Tu	30	4:00 4.6	10:18 −0.4	16:48 4.6	22:30 0.9

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	4:24 4.7	10:52 −0.9	17:30 4.7	23:05 1.2
	Th	2	4:50 4.7	11:25 −1.1	18:08 4.7	23:37 1.4
	F	3	5:15 4.7	12:00 −1.2	18:45 4.6	. . . . .
	S	4	0:10 1.6	5:40 4.6	12:38 −1.1	19:24 4.3
	S	5	0:45 1.9	6:05 4.5	13:10 −0.9	20:02 4.0
S	M	6	1:18 2.1	6:30 4.3	13:48 −0.5	20:48 3.7
	Tu	7	1:55 2.4	6:55 4.0	14:30 −0.1	21:47 3.4
A	W	8	2:44 2.6	7:25 3.6	15:25 0.4	23:05 3.3
☾	Th	9	4:02 2.7	16:32 0.8	. . . . .	. . . . .
	F	10	0:33 3.3	5:48 2.6	9:58 2.9	17:52 1.0
	S	11	1:30 3.5	7:22 2.1	12:47 2.9	19:03 1.1
	S	12	2:05 3.7	8:12 1.5	14:13 3.2	20:02 1.1
E	M	13	2:35 3.9	8:48 0.8	15:10 3.6	20.52 1.1
	Tu	14	3:03 4.1	9:25 0.2	15:58 4.1	21:35 1.2
	W	15	3:30 4.3	10:00 −0.5	16:41 4.5	22:17 1.3
	Th	16	3:58 4.5	10:35 −1.0	17:23 4.7	22:56 1.5
●	F	17	4:27 4.6	11:15 −1.5	18:07 4.9	23:36 1.7
	S	18	4:57 4.7	11:52 −1.7	18:52 4.8	. . . . .
N	S	19	0:15 2.0	5:28 4.7	12:35 −1.7	19:40 4.7
P	M	20	1:00 2.2	6:03 4.6	13:20 −1.6	20:33 4.4
	Tu	21	1:44 2.5	6:43 4.4	14:10 −1.2	21.33 4.2
	W	22	2:40 2.6	7:26 4.1	15:05 −0.7	22:33 4.0
☽	Th	23	3:50 2.6	8:30 3.6	16:09 −0.1	23:43 3.9
	F	24	5:19 2.4	10:18 3.2	17:18 0.4	. . . . .
	S	25	0:40 3.9	6:42 1.8	12:20 3.1	18:28 0.9
E	S	26	1:26 4.0	7:47 1.1	14:00 3.3	19:34 1.2
	M	27	2:03 4.1	8:36 −0.4	15:10 3.7	20:30 1.5
	Tu	28	2:37 4.3	9:17 −0.2	16:03 4.0	21:18 1.7
	W	29	3:10 4.4	9:53 −0.7	16:48 4.3	22.00 1.9
	Th	30	3:45 4.5	10:30 −1.0	17:28 4.4	22:38 2.0
○	F	31	4:12 4.5	11:03 −1.2	18:04 4.4	23:15 2.0

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:40 4.5	11:38 −1.2	18:40 4.4	23:52 2.1
S	S	2	5:14 4.5	12:16 −1.1	19:16 4.3	. . . . .
	M	3	0:30 2.1	5:45 4.4	12:53 −0.9	19:55 4.1
A	Tu	4	1:08 2.2	6:17 4.2	13:32 −0.6	20:38 3.9
	W	5	1:51 2.3	6:48 4.0	14:12 −0.3	21:22 3.8
	Th	6	2:42 2.4	7:26 3.7	14:55 0.1	22:11 3.7
	F	7	3:42 2.3	8:20 3.3	15:45 0.5	23:00 3.7
☾	S	8	4:57 2.1	9:40 3.0	16:42 1.0	23:47 3.7
E	S	9	6:08 1.7	11:43 2.8	17:47 1.3	. . . . .
	M	10	0:33 3.8	7:12 1.2	13:33 3.0	18:55 1.6
	Tu	11	1:14 3.9	8:00 0.5	14:47 3.4	20:00 1.8
	W	12	1:55 4.0	8:47 −0.2	15:45 3.9	20:58 2.0
	Th	13	2:35 4.2	9:30 −0.8	16:34 4.3	21:48 2.1
	F	14	3:13 4.4	10:13 −1.3	17:22 4.6	22:35 2.2
●	S	15	3:54 4.6	10:57 −1.7	18:08 4.8	23:23 2.2
N	S	16	4:34 4.7	11:43 −2.0	18:53 4.9	. . . . .
P	M	17	0:07 2.3	5:18 4.8	12:28 −2.0	19:37 4.8
	Tu	18	0:50 2.3	6:05 4.7	13:14 −1.7	20:24 4.6
	W	19	1:40 2.2	6:50 4.5	14:00 −1.3	21:10 4.4
	Th	20	2:32 2.1	7:50 4.2	14:48 −0.7	21:55 4.3
	F	21	3:35 1.9	8:50 3.6	15:40 0.0	22:42 4.1
☽ E	S	22	4:40 1.6	10:17 3.2	16:32 0.8	23:24 4.0
	S	23	5:53 1.2	12:02 3.0	17:32 1.5	. . . . .
	M	24	0:08 4.0	7:02 0.7	13:48 3.1	18:38 2.0
	Tu	25	0:58 4.0	8:00 0.2	15:12 3.4	19:48 2.3
	W	26	1:38 4.1	8:50 −0.2	16:08 3.7	20:46 2.4
	Th	27	2:25 4.2	9:33 −0.6	16:54 4.0	21:38 2.5
	F	28	3:08 4.2	10:13 −0.9	17:30 4.2	22:22 2.4
S ○	S	29	3:50 4.3	10:52 −1.0	18:02 4.3	23:03 2.3
	S	30	4:30 4.4	11:28 −1.1	18:35 4.3	23:40 2:1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	5:00	12:05	19:10	. . .			Th	1	0:38	6:14	12:53	19:30			S	1	1:15	7:16	13:28	19:20	
			4.4	—1.1	4.3	. . .					1.4	4.5	—0.7	4.4					0.2	4.3	0.6	4.4	
A	Tu	2	0:18	5:43	12:40	19:38			F	2	1:12	6:48	13:23	19:52			M	2	1:50	7:56	13:58	19:39	
			2.1	4.4	—1.0	4.3					1.2	4.3	—0.3	4.4					0.1	4.0	1.1	4.3	
	W	3	0:58	6:17	13:15	20:10		E	S	3	1:48	7:25	13:53	20:15			Tu	3	2:27	8:46	14:24	19:59	
			2.0	4.3	—0.7	4.2					1.1	4.1	0.1	4.3					0.1	3.6	1.7	4.1	
	Th	4	1:37	6:53	13:52	20:42			S	4	2:28	8:07	14:25	20:38		☾	W	4	3:19	10:08	15:02	20:27	
			1.9	4.1	—0.4	4.1					1.0	3.7	0.7	4.2					0.2	3.2	2.3	4.0	
	F	5	2:20	7:32	14:25	21:15			M	5	3:12	8:58	15:00	21:00			Th	5	4:29	12:32	16:21	21:06	
			1.8	3.8	0.0	4.1					0.9	3.4	1.3	4.0					0.3	3.1	2.9	3.7	
	S	6	3:08	8:15	15:08	21:45		☾	Tu	6	4:05	10:16	15:42	21:32		N	F	6	6:02	14:56	18:48	22:52	
			1.7	3.5	0.5	4.0					0.7	3.1	1.9	3.9					0.2	3.5	3.1	3.5	
E	S	7	4:03	9:18	15:44	22:20			W	7	5:15	12:23	16:53	22:18			S	7	7:34	15:39	20:29	. . .	
			1.5	3.1	1.0	3.9					0.6	2.9	2.5	3.8					—0.1	4.0	2.8	. . .	
☾	M	8	5:04	10:50	16:37	23:00			Th	8	6:55	14:43	18:44	23:45			S	8	1:24	8:44	16:12	21:21	
			1.3	2.9	1.6	3.8					0.3	3.4	2.9	3.7					3.7	—0.6	4.2	2.3	
	Tu	9	6:10	12:50	17:52	23:47			F	9	7:52	15:52	20:23	. . .			M	9	2:44	9:37	16:39	22:02	
			0.9	2.9	2.1	3.8					—0.2	3.8	2.9	. . .					4.2	—1.0	4.6	1.7	
	W	10	7:15	14:35	19:15	. . .		N	S	10	1:22	8:57	16:34	21:27		P	Tu	10	3:41	10:20	17:06	22:40	
			0.3	3.3	2.4	. . .					3.9	—0.8	4.3	2.7					4.6	—1.1	4.8	1.0	
	Th	11	0:45	8:15	15:45	20:30			S	11	2:40	9:50	17:10	22:15		●	W	11	4:32	11:00	17:32	23:17	
			3.9	—0.3	3.8	2.6					4.2	—1.3	4.6	2.3					5.0	—1.1	4.9	0.4	
	F	12	1:48	9:09	16:37	21:30		P	M	12	3:40	10:38	17:42	22:57		E	Th	12	5:19	11:37	17:56	23:58	
			4.1	—0.9	4.2	2.6					4.6	—1.6	4.8	1.8					5.2	—0.8	4.9	—0.1	
N	S	13	2:46	10:00	17:22	22:24		●	Tu	13	4:30	11:22	18:12	23:40			F	13	6:08	12:14	18:21	. . .	
			4.3	—1.4	4.6	2.5					5.0	—1.7	4.9	1.4					5.2	—0.3	4.9	. . .	
●	S	14	3:37	10:48	18:00	23:12			W	14	5:23	12:00	18:43	. . .			S	14	0:29	6:46	12:46	18:45	
			4.6	—1.8	4.8	2.3					5.2	—1.6	4.9	. . .					—0.4	4.9	0.3	4.8	
P	M	15	4:30	11:34	18:42	23:58			Th	15	0:18	6:08	12:40	19:10			S	15	1:07	7:28	13:18	19:03	
			4.8	—2.0	4.9	2.0					0.9	5.1	—1.2	4.8					—0.5	4.5	0.9	4.6	
	Tu	16	5:18	12:20	19:18	. . .		E	F	16	1:00	6:55	13:16	19:37			M	16	1:45	8:14	13:49	19:27	
			5.0	—2.0	4.9	. . .					0.6	4.9	—0.5	4.7					—0.5	4.1	1.5	4.4	
	W	17	0:40	6:08	13:00	19:58			S	17	1:39	7:40	13:50	20:08			Tu	17	2:27	9:05	14:17	19:46	
			1.8	4.9	—1.6	4.8					0.3	4.4	0.2	4.5					—0.2	3.5	2.0	4.1	
	Th	18	1:23	6:58	13:43	20:28			S	18	2:28	8:32	14:25	20:28		☽	W	18	3:14	10:21	14:48	20:02	
			1.5	4.7	—1.1	4.6					0.3	3.9	1.0	4.3					0.2	3.0	2.5	3.8	
E	F	19	2:10	7:48	14:24	21:00			M	19	3:10	9:31	14:57	20:50		S	Th	19	4:21	13:47	15:45	20:20	
			1.3	4.3	—0.4	4.5					0.3	3.4	1.7	4.1					0.6	2.9	2.9	3.4	
	S	20	3:00	8:48	15:02	21:34		☽	Tu	20	4:05	10:54	15:30	21:15			F	20	5:58	15:16	18:51	22:40	
			1.1	3.8	0.4	4.3					0.4	2.9	2.3	3.9					0.8	3.2	3.0	3.1	
☽	S	21	3:57	9:57	15:43	22:06			W	21	5:15	13:47	16:33	21:52			S	21	7:41	15:40	20:52	. . .	
			0.9	3.4	1.2	4.1					0.6	2.9	2.8	3.6					0.7	3.5	2.6	. . .	
	M	22	5:00	11:32	16:32	22:45			Th	22	6:43	15:40	18:42	23:53		A	S	22	1:58	8:45	16:00	21:19	
			0.8	2.9	1.9	4.0					0.6	3.2	3.0	3.4					3.8	0.5	3.8	2.1	
	Tu	23	6:11	13:40	17:35	23:40		S	F	23	8:12	16:15	20:40	. . .			M	23	2:54	9.27	16:19	21:46	
			0.6	2.9	2.5	3.8					0.4	3.5	2.8	. . .					3.7	0.2	4.0	1.6	
	W	24	7:25	15:27	19:05	. . .			S	24	1:55	9:10	16:38	21:30			Tu	24	3:39	10:00	16:36	22:15	
			0.3	3.2	2.8	. . .					3.5	0.1	3.8	2.5					4.0	0.0	4.2	1.1	
	Th	25	0:48	8:30	16:20	20:30		A	S	25	3:03	9:58	17:00	22:07			W	25	4:15	10:30	16:54	22:44	
			3.8	0.0	3.5	2.8					3.8	—0.2	4.0	2.1					4.4	—0.1	4.4	0.6	
S	F	26	2:00	9:23	16:55	21:30			M	26	3:45	10:28	17:22	22:38		E	Th	26	4:49	10:59	17:18	23.13	
			3.8	—0.3	3.8	2.7					4.2	—0.5	4.2	1.7		○			4.6	—0.1	4.6	0.1	
	S	27	2:55	10:04	17:24	22:15			Tu	27	4:25	11:00	17:40	23:09			F	27	5:24	11:28	17:33	23:43	
			4.0	—0.5	4.0	2.4					4.4	—0.6	4.4	1.3					4.7	0.1	4.7	—0.2	
	S	28	3:45	10:42	17:50	22:58		○	W	28	5:00	11:28	18:00	23:40			S	28	5:56	12:56	17:58	. . .	
			4.2	—0.7	4.2	2.1					4.6	—0.6	4.5	0.9					4.8	0.3	4.7	. . .	
○	M	29	4:27	11:21	18:17	23:28			Th	29	5:35	12:00	18:22	. . .			S	29	0:14	6:30	12:27	18:13	
A			4.4	—0.9	4.3	1.9					4.7	—0.5	4.6	. . .					—0.5	4.7	0.7	4.6	
	Tu	30	5:04	11:52	18:42	. . .		E	F	30	0:10	6:08	12:27	18:40			M	30	0:45	7:10	12:57	18:32	
			4.5	—0.9	4.4	. . .					0.6	4.6	—0.3	4.6					—0.6	4.5	1.2	4.5	
	W	31	0:08	5:38	12:23	19:07			S	31	0:42	6:40	12:55	19:00									
			1.6	4.5	—0.9	4.4					0.4	4.5	0.1	4.5									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:16	7:53	13:30	18:53
			−0.6	4.2	1.7	4.4
	W	2	2:01	8:48	14:04	19:17
			−0.5	3.8	2.2	4.2
N	Th	3	2:52	10:13	14:52	19:42
			−0.2	3.4	2.7	3.9
☾	F	4	4:05	12:42	16:36	20:23
			0.0	3.4	3.1	3.6
	S	5	5:40	14:23	19:08	23:09
			0.2	3.7	3.0	3.2
	S	6	7:14	15:02	20:24	. . .
			0.0	4.0	2.4	. . .
	M	7	1:34	8:28	15:31	21:06
			3.5	−0.2	4.3	1.7
P	Tu	8	2:47	9:15	15:56	21:43
			4.1	−0.3	4.5	0.9
E	W	9	3:43	9:57	16:21	22:19
			4.6	−0.3	4.7	0.1
●	Th	10	4:31	10:34	16:45	22:54
			4.9	−0.1	4.8	−0.5
	F	11	5:16	11:11	17:10	23:27
			5.1	0.2	4.9	−0.9
	S	12	5:56	11:45	17:34	. . .
			5.1	0.6	4.9	. . .
	S	13	0:08	6:36	12:18	17:57
			−1.1	4.9	1.1	4.8
	M	14	0:35	7:16	12:48	18:20
			−1.1	4.5	1.5	4.6
	Tu	15	1:14	7:58	13:20	18:40
			−0.9	4.1	1.9	4.4
S	W	16	1:52	8:46	13:58	19:01
			−0.5	3.6	2.3	4.1
	Th	17	2:37	9:54	14:33	19:22
			0.0	3.2	2.6	3.7
☽	F	18	3:37	12:05	15:53	19:41
			0.5	3.1	2.9	3.3
A	S	19	5:04	14:03	18:25	20:25
			0.9	3.2	2.8	2.9
	S	20	6:40	14:39	20:16	. . .
			1.0	3.5	2.3	. . .
	M	21	1:30	7:55	15:01	20:47
			3.0	0.9	3.7	1.7
	Tu	22	2:37	8:42	15:22	21:16
			3.4	0.7	4.0	1.1
	W	23	3:28	9:19	15:41	21:46
			3.8	0.7	4.2	0.5
E	Th	24	4:03	9:53	16:02	22:15
			4.2	0.6	4.4	0.0
	F	25	4:38	10:27	16:24	22:45
			4.5	0.7	4.6	−0.5
○	S	26	5:14	10:59	16:46	23:16
			4.7	0.9	4.7	−0.9
	S	27	5:50	11:33	17:09	23:49
			4.8	1.1	4.7	−1.2
	M	28	6:29	12:06	17:32	. . .
			4.8	1.4	4.7	. . .
	Tu	29	0:25	7:11	12:42	17:58
			−1.3	4.6	1.8	4.6
N	W	30	1:03	7:59	13:19	18:24
			−1.2	4.3	2.2	4.4
	Th	31	1:48	8:58	14:08	18:54
			−1.0	4.0	2.6	4.2

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	2:41	10:20	15:09	19:31
			−0.6	3.7	2.9	3.8
☾	S	2	3:50	12:01	16:51	20:39
			−0.2	3.6	3.0	3.4
P	S	3	5:13	13:18	18:46	23:35
			0.2	3.8	2.5	3.1
	M	4	6:38	14:04	19:57	. . .
			0.4	4.0	1.8	. . .
	Tu	5	1:33	7:48	14:36	20:41
			3.4	0.5	4.2	1.0
E	W	6	2:47	8:44	15:06	21:20
			3.9	0.6	4.4	0.2
	Th	7	3:42	9:28	15:33	21:56
			4.3	0.8	4.6	−0.5
	F	8	4:30	10:08	15:59	22:30
			4.6	1.0	4.7	−1.0
●	S	9	5:13	10:45	16:27	23:06
			4.8	1.3	4.8	−1.3
	S	10	5:52	11:20	16:53	23:41
			4.8	1.5	4.8	−1.4
	M	11	6:31	11:55	17:22	. . .
			4.7	1.7	4.7	. . .
S	Tu	12	0:15	7:09	12:27	17:48
			−1.3	4.4	1.9	4.6
	W	13	0:52	7:49	13:07	18:15
			−1.1	4.1	2.1	4.3
	Th	14	1:30	8:34	13:42	18:42
			−0.7	3.8	2.4	4.1
	F	15	2:15	9:29	14:31	19:10
			−0.2	3.5	2.6	3.7
A	S	16	3:05	10:41	15:43	19:50
			0.3	3.4	2.6	3.3
☽	S	17	4:08	12:01	17:29	21:29
			0.7	3.4	2.5	2.8
	M	18	5:22	13:02	19:01	. . .
			1.1	3.5	2.1	. . .
	Tu	19	0:31	6:36	13:41	19:58
			2.8	1.2	3.7	1.5
E	W	20	2:04	7:39	14:13	20:37
			3.1	1.3	3.9	0.8
	Th	21	3:01	8:31	14:40	21:10
			3.5	1.4	4.1	0.2
	F	22	3:48	9:16	15:09	21:44
			3.9	1.4	4.3	−0.4
	S	23	4:29	9:57	15:37	22:19
			4.3	1.5	4.5	−1.0
	S	24	5:09	10:30	16:05	22:56
			4.6	1.6	4.6	−1.4
○	M	25	5:49	11:15	16:36	23:33
			4.8	1.8	4.7	−1.6
	Tu	26	6:31	11:55	17:08	. . .
			4.8	2.0	4.7	. . .
N	W	27	0:14	7:17	12:34	17:41
			−1.7	4.7	2.2	4.7
P	Th	28	0:56	8:06	13:18	18:20
			−1.6	4.5	2.4	4.5
	F	29	1:42	8:59	14:09	19:01
			−1.3	4.3	2.5	4.2
	S	30	2:34	9:59	15:13	19:55
			−0.9	4.1	2.6	3.8

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	3:33	11:00	16:30	21:18
			−0.3	3.9	2.4	3.3
	M	2	4:37	12:00	18:00	23:30
			0.3	3.9	1.9	3.1
E	Tu	3	5:50	12:50	19:15	. . .
			0.9	4.0	1.2	. . .
	W	4	1:24	7:00	13:32	20:10
			3.2	1.3	4.1	0.5
	Th	5	2:47	8:04	14:10	20:55
			3.6	1.6	4.2	−0.2
	F	6	3:48	8:57	14:48	21:35
			4.0	1.8	4.4	−0.7
	S	7	4:35	9:48	15:23	22:13
			4.3	2.0	4.5	−1.1
	S	8	5:17	10:25	15:57	22:50
			4.5	2.0	4.6	−1.3
●	M	9	5:58	11:00	16:30	23:27
			4.5	2.1	4.6	−1.4
S	Tu	10	6:30	11:40	17:00	. . .
			4.5	2.1	4.6	. . .
	W	11	0:04	7:05	12:18	17:37
			−1.3	4.4	2.1	4.5
	Th	12	0:40	7:40	12:49	18:10
			−1.1	4.2	2.1	4.3
	F	13	1:18	8:20	13:35	18:43
			−0.8	4.1	2.2	4.1
A	S	14	1:57	9:00	14:20	19:22
			−0.4	3.9	2.2	3.8
	S	15	2:35	9:40	15:15	20:04
			0.0	3.8	2.2	3.4
	M	16	3:18	10:24	16:24	21:08
			0.5	3.7	2.0	3.0
P	Tu	17	4:08	11:10	17:38	23:06
			1.0	3.6	1.7	2.7
	W	18	5:13	11:55	18:47	. . .
			1.5	3.7	1.3	. . .
	Th	19	1:12	6:22	12:43	19:44
			2.8	1.8	3.8	0.7
	F	20	2:40	7:35	13:28	20:33
			3.2	2.1	3.9	0.0
	S	21	3:40	8:38	14:17	21:18
			3.7	2.2	4.1	−0.6
	S	22	4:27	9:32	14:55	22:00
			4.1	2.3	4.3	−1.1
	M	23	5:11	10:20	15:37	22:42
			4.5	2.3	4.5	−1.6
N ○	Tu	24	5:52	11:04	16:20	23:25
			4.7	2.2	4.7	−1.9
	W	25	6:33	11:48	17:00	. . .
			4.8	2.2	4.8	. . .
P	Th	26	0:08	7:15	12:30	17:45
			−2.0	4.8	2.2	4.8
	F	27	0:50	7:57	13:15	18:30
			−1.8	4.7	2.1	4.7
	S	28	1:37	8:38	14:02	19:20
			−1.5	4.6	2.0	4.4
	S	29	2:20	9:20	14:56	20:15
			−0.9	4.4	1.8	4.0
E	M	30	3:07	10:00	15:58	21:30
			−0.2	4.2	1.5	3.4
☾	Tu	31	3:55	10:40	17:08	23:08
			0.6	4.1	1.2	3.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	5:30 6.5	11:28 3.0	16:58 6.6	23:44 0.0
	Tu	2	6:34 7.3	12:30 2.9	17:58 7.0	. . . . .
	W	3	0:38 −0.9	7:26 7.6	13:21 2.6	18:50 7.4
N ○ P	Th	4	1:26 −1.5	8:13 8.1	14:06 2.3	19:38 7.8
	F	5	2:13 −1.9	8:58 8.4	14:51 2.0	20:26 8.1
	S	6	2:58 −2.1	9:35 8.8	15:33 1.7	21:10 8.1
	S	7	3:43 −1.8	10:15 8.7	16:17 1.6	21:55 8.0
	M	8	4:24 −1.3	10:55 8.4	17:00 1.6	22:42 7.6
	Tu	9	5:07 −0.5	11:34 8.0	17:47 1.6	23:33 7.0
E	W	10	5:52 0.5	12:14 7.4	18:35 1.7	. . . . .
☾	Th	11	0:30 6.4	6:43 1.6	12:58 6.8	19:28 1.8
	F	12	1:42 5.8	7:43 2.6	13:47 6.3	20:37 1.9
	S	13	3:07 5.4	8:59 3.4	14:45 5.9	21:57 1.7
	S	14	5:09 5.6	10:33 3.8	15:59 5.8	23:10 1.3
	M	15	6:28 6.0	11:52 3.8	17:10 5.9	. . . . .
	Tu	16	0:06 0.8	7:15 6.4	12:47 3.6	18:05 6.1
S	W	17	0:50 0.8	7:50 6.9	13:28 3.2	18:50 6.4
A	Th	18	1:26 −0.1	8:15 7.2	14:02 2.9	19:23 6.8
●	F	19	2:00 −0.5	8:40 7.4	14:38 2.5	20:02 7.1
	S	20	2:30 −0.7	9:05 7.8	15:02 2.2	20:34 7.3
	S	21	3:00 −0.9	9:30 8.0	15:31 1.9	21:07 7.5
	M	22	3:31 −0.7	9:57 8.1	16:02 1.7	21:40 7.6
	Tu	23	4:01 −0.5	10:25 8.0	16:33 1.5	22:18 7.5
	W	24	4:36 0.0	10:55 7.8	17:06 1.4	22:57 7.3
E	Th	25	5:10 0.7	11:27 7.6	17:42 1.4	23:42 6.9
	F	26	5:49 1.5	12:05 7.1	18:25 1.4	. . . . .
☽	S	27	0:30 6.4	6:35 2.4	12:45 6.6	19:23 1.4
	S	28	1:44 5.9	7:45 3.2	13:39 6.2	20:42 1.4
	M	29	3:32 5.7	9:35 3.8	14:57 6.0	22:11 1.0
	Tu	30	5:27 6.1	11:18 3.8	16:30 6.1	23:28 0.2
N	W	31	6:36 6.9	12:26 3.3	17:47 6.6	. . . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:30 −0.6	7:28 7.6	13:27 2.7	18:46 7.3
P	F	2	1:20 −1.4	8:08 8.2	14:00 2.0	19:35 7.9
○	S	3	2:06 −1.8	8:40 8.6	14:38 1.4	20:21 8.4
	S	4	2:50 −1.9	9:15 8.9	15:18 0.9	21:04 8.6
	M	5	3:27 −1.7	9:48 8.9	15:55 0.6	21:46 8.5
E	Tu	6	4:05 −1.1	10:21 8.6	16:32 0.5	22:28 8.1
	W	7	4:42 −0.2	10:54 8.2	17:08 0.6	23:10 7.5
	Th	8	5:22 0.8	11:30 7.6	17:47 0.9	23:55 6.7
	F	9	6:00 1.9	12:02 6.9	18:32 1.3	. . . . .
☾	S	10	0:48 5.9	6:42 3.0	12:35 6.3	19:32 1.8
	S	11	2:02 5.2	7:44 3.9	13:21 5.7	20:58 2.0
	M	12	5:07 5.8	9:57 3.9	14:45 5.3	22:37 1.8
	Tu	13	6:35 5.7	11:55 3.9	16:43 5.2	23:47 1.3
S	W	14	7:10 6.3	12:47 3.7	17:55 5.7	. . . . .
A	Th	15	0:35 0.8	7:35 6.8	13:20 3.1	18:42 6.2
	F	16	1:10 0.2	7:55 7.3	13:48 2.6	19:20 6.8
	S	17	1:41 −0.3	8:16 7.7	14:13 2.0	19:52 7.3
●	S	18	2:12 −0.6	8:37 8.0	14:40 1.5	20:22 7.7
	M	19	2:40 −0.7	9:00 8.3	15:06 1.0	20:55 8.0
	Tu	20	3:10 −0.7	9:25 8.4	15:35 0.6	21:27 8.2
E	W	21	3:42 −0.4	9:53 8.3	16:03 0.4	22:02 8.1
	Th	22	4:18 0.2	10:28 8.1	16:34 0.4	22:40 7.8
	F	23	4:45 0.8	10:52 7.7	17:06 0.4	23:18 7.4
	S	24	5:27 1.8	11:23 7.2	17:49 0.6	. . . . .
	S	25	0:10 6.7	6:05 2.8	11:59 6.7	18:43 1.0
☽	M	26	1:21 6.9	7:10 3.7	12:47 6.1	20:03 1.3
	Tu	27	3:22 5.7	9:28 4.0	14:16 5.6	21:50 1.2
N	W	28	5:31 6.1	11:18 4.4	16:22 5.7	23:18 0.5
	Th	29	6:29 6.9	12:21 3.2	17:45 6.5	. . . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:20 −0.2	7:08 7.6	13:04 2.3	18:42 7.3
	S	2	1:10 −0.9	7:41 8.3	13:42 1.4	19:30 8.1
○	S	3	1:51 −1.3	8:13 8.7	14:18 0.6	20:14 8.7
	M	4	2:30 −1.3	8:45 8.8	14:52 0.1	20:52 8.9
E	Tu	5	3:07 −1.0	9:18 8.8	15:28 −0.2	21:30 8.7
	W	6	3:44 −0.4	9:48 8.6	16:02 −0.2	22:08 8.4
	Th	7	4:18 0.3	10:20 8.1	16:32 −0.1	22:42 7.7
	F	8	4:50 1.3	10:45 7.6	17:07 0.4	23:22 6.8
	S	9	5:28 2.3	11:12 8.0	17:48 0.9	. . . . .
	S	10	0:07 6.0	5:57 3.3	11:40 6.3	18:37 1.6
☾	M	11	1:10 5.3	6:47 4.0	12:11 5.6	19:50 2.1
S	Tu	12	4:17 5.0	8:35 4.0	13:20 5.0	21:45 2.3
A	W	13	6:08 5.8	11:44 4.0	16:20 4.9	23:12 1.8
	Th	14	6:35 6.3	12:24 3.5	17:39 5.5	. . . . .
	F	15	0:08 1.2	6:55 6.7	12:50 2.8	18:25 6.2
	S	16	0:40 0.7	7:15 7.2	13:17 2.1	19:00 6.9
	S	17	1:14 0.2	7:35 7.7	13:42 1.4	19:33 7.6
	M	18	1:45 −0.2	7:58 8.1	14:10 0.7	20:05 8.1
● E	Tu	19	2:18 −0.3	8:28 8.3	14:36 0.2	20:37 8.4
	W	20	2:50 −0.2	8:54 8.4	15:05 −0.2	21:10 8.6
	Th	21	3:24 0.1	9:21 8.2	15:35 −0.4	21:45 8.5
	F	22	3:56 0.7	9:50 8.0	16:05 −0.5	22:22 8.1
	S	23	4:30 1.5	10:19 7.6	16:43 −0.3	23:08 7.5
	S	24	5:08 2.4	10:51 7.1	17:26 0.2	. . . . .
	M	25	0:01 6.8	5:55 3.3	11:28 6.5	18:23 0.7
N ☽	Tu	26	1:16 6.1	7:15 4.0	12:22 5.8	19:46 1.2
	W	27	3:21 5.9	9:28 4.0	14:12 5.4	21:35 1.3
	Th	28	5:07 6.3	11:07 3.6	16:25 5.7	23:02 0.8
P	F	29	5:58 7.0	12:00 2.7	17:40 6.5	. . . . .
	S	30	0:02 0.2	6:36 7.5	12:42 1.7	18:32 7.4
	S	31	0:50 −0.2	7:08 8.0	13:17 0.8	19:17 8.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	1:30	7:42	13:51	19:57
			−0.4	8.4	0.0	8.6
○	Tu	2	2:10	8:14	14:16	20:34
			−0.3	8.5	−0.5	8.8
	W	3	2:45	8:42	14:56	21:06
			−0.1	8.4	−0.7	8.6
	Th	4	3:18	9:10	15:27	21:45
			0.5	8.2	−0.7	8.2
	F	5	3:50	9:37	16:01	22:01
			1.2	7.9	−0.5	7.7
	S	6	4:21	10:04	16:37	22:58
			2.0	7.4	0.0	6.9
	S	7	4:55	10:32	17:13	23:48
			2.8	6.9	0.6	6.2
S	M	8	5:31	11:00	17:57	. . .
			3.5	6.8	1.3	. . .
	Tu	9	0:38	6:28	11:37	18:57
			5.6	4.0	5.6	1.9
☾ A	W	10	2:20	8:38	12:50	20:33
			5.3	4.0	5.0	2.2
	Th	11	4:26	10:38	15:32	22:08
			5.6	3.9	4.8	2.1
	F	12	5:20	11:32	17:02	23:12
			6.0	3.2	5.4	1.7
	S	13	5:53	12:05	17:57	23:58
			6.5	2.4	6.1	1.2
	S	14	6:20	12:37	18:30	. . .
			7.0	1.6	6.9	. . .
	M	15	0:40	6:50	13:02	19:07
			0.9	7.5	0.9	7.6
E	Tu	16	1:18	7:20	13:32	19:42
			0.6	7.8	0.1	8.2
●	W	17	1:51	7:49	14:01	20:14
			0.4	8.0	−0.5	8.6
	Th	18	2:27	8:18	14:33	20:54
			0.6	8.1	−0.9	8.7
	F	19	3:08	8:48	15:08	21:34
			1.0	8.0	−1.1	8.6
	S	20	3:40	9:20	15:46	22:18
			1.5	7.8	−1.0	8.2
	S	21	4:20	9:54	16:28	23:08
			2.2	7.4	−0.7	7.6
N	M	22	5:05	10:32	17:17	. . .
			2.9	6.9	−0.2	. . .
P	Tu	23	0:06	6:04	11:20	18:18
			7.0	3.5	6.3	0.5
☽	W	24	1:21	7:30	12:29	19:40
			6.4	3.8	5.7	1.1
	Th	25	2:59	9:14	14:22	21:14
			6.3	3.7	5.5	1.4
	F	26	4:20	10:34	16:16	22:34
			6.5	2.9	5.8	1.3
	S	27	5:13	11:28	17:25	23:34
			6.9	2.0	6.5	1.1
	S	28	5:56	12:10	18:19	. . .
			7.2	1.2	7.3	. . .
E	M	29	0:26	6:34	12:46	19:00
			0.9	7.6	0.5	7.9
	Tu	30	1:08	7:08	13:21	19:41
			0.8	7.8	−0.2	8.2

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:45	7:38	13:56	20:20
			0.9	7.9	−0.7	8.3
	Th	2	2:20	8:06	14:29	20:58
			1.2	7.9	−0.9	8.1
	F	3	2:52	8:36	15:03	21:34
			1.7	7.7	−0.9	7.8
	S	4	3:28	9:06	15:36	22:08
			2.1	7.5	−0.6	7.5
	S	5	4:01	9:34	16:11	22:45
			2.6	7.1	−0.2	7.0
S	M	6	4:38	10:06	16:48	23:28
			3.0	6.7	0.3	6.6
	Tu	7	5:22	10:42	17:30	. . .
			3.5	6.2	0.9	. . .
A	W	8	0:17	6:24	11:30	18:22
			6.2	3.8	5.7	1.5
☾	Th	9	1:21	7:48	12:40	19:31
			5.9	3.8	5.2	1.9
	F	10	2:34	9:16	15:24	20:52
			5.9	3.5	4.	2.1
	S	11	3:41	10:19	16:00	22:10
			6.1	2.9	5.4	2.1
	S	12	4:32	11:02	17:06	23:12
			6.4	2.1	6.1	1.9
E	M	13	5:18	11:40	17:54	. . .
			6.7	1.4	6.8	. . .
	Tu	14	0:00	6:00	12:18	18:36
			1.6	7.1	0.6	7.5
	W	15	0:44	6:36	12:56	19:20
			1.4	7.4	−0.3	8.1
	Th	16	1:26	7:10	13:33	20:03
			1.4	7.7	−0.9	8.5
●	F	17	2:07	7:46	14:12	20:48
			1.6	7.8	−1.4	8.6
	S	18	2:49	8:24	14:53	21:30
			1.8	7.8	−1.5	8.6
N	S	19	3:32	9:02	15:36	22:20
			2.1	7.7	−1.4	8.3
P	M	20	4:17	9:44	16:22	23:08
			2.5	7.4	−1.0	7.9
	Tu	21	5:09	10:30	17:14	. . .
			2.8	6.9	−0.4	. . .
	W	22	0:04	6:10	11:26	18:12
			7.4	3.1	6.4	0.3
☽	Th	23	1:08	7:22	12:40	19:21
			7.0	3.2	6.0	1.0
	F	24	2:14	8:40	14:14	20:38
			6.7	2.8	5.7	1.5
	S	25	3:21	9:50	15:48	21:54
			6.6	2.3	5.9	1.9
E	S	26	4:17	10:44	17:02	23:06
			6.7	1.7	6.4	2.0
	M	27	5:06	11:34	18:00	23:58
			6.8	1.0	6.8	2.0
	Tu	28	5:51	12:18	18:50	. . .
			7.0	0.3	7.8	. . .
	W	29	0:44	6:28	13:00	19:34
			2.1	7.2	−0.2	7.5
	Th	30	1:24	7:04	13:36	20:14
			2.3	7.3	−0.6	7.5
○	F	31	2:02	7:38	14:11	20:50
			2.4	7.4	−0.8	7.4

JUNE.

Moon.	Da. of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	2:38	8:11	14:46	21:26
			2.5	7.3	−0.8	7.6
S	S	2	3:14	8:45	15:20	22:00
			2.7	7.2	−0.6	7.4
	M	3	3:51	9:18	15:54	22:33
			2.8	7.0	−0.3	7.3
A	Tu	4	4:30	9:52	16:31	23:10
			3.0	6.7	0.1	7.0
	W	5	5:13	10:34	17:10	23:50
			3.1	6.4	0.5	6.8
	Th	6	6:01	11:20	17:53	. . .
			3.1	6.1	1.0	. . .
	F	7	0:36	6:56	12:18	18:46
			6.6	3.1	5.7	1.6
☾	S	8	1:21	7:54	13:28	19:50
			6.5	2.9	5.6	2.1
E	S	9	2:14	8:56	14:52	21:04
			6.4	2.4	5.6	2.4
	M	10	3:12	9:53	16:06	22:14
			6.4	1.9	5.9	2.6
	Tu	11	4:11	10:49	17:14	23:18
			6.5	1.2	6.5	2.5
	W	12	5:04	11:40	18:14	. . .
			6.8	0.4	7.1	. . .
	Th	13	0:16	5:53	12:29	19:07
			2.4	7.1	−0.4	7.7
	F	14	1:07	6:40	13:14	19:56
			2.3	7.4	−1.1	8.2
●	S	15	1:53	7:26	14:00	20:43
			2.3	7.6	−1.6	8.5
N	S	16	2:40	8:10	14:43	21:29
			2.2	7.7	−1.8	8.6
P	M	17	3:25	8:54	15:30	22:14
			2.2	7.7	−1.7	8.5
	Tu	18	4:12	9:42	16:17	23:00
			2.2	7.6	−1.3	8.2
	W	19	5:01	10:32	17:06	23:46
			2.3	7.3	−0.7	7.8
	Th	20	5:54	11:27	17:56	. . .
			2.3	6.9	0.1	. . .
	F	21	0:34	6:51	12:30	18:53
			7.4	2.2	6.4	1.0
☽	S	22	1:24	7:50	13:45	19:59
E			7.0	2.1	6.0	1.9
	S	23	2:16	8:53	15:13	21:16
			6.6	1.9	5.9	2.6
	M	24	3:16	10:02	16:36	22:28
			6.4	1.5	6.0	3.0
	Tu	25	4:14	11:04	17:54	23:32
			6.3	1.0	6.4	3.2
	W	26	5:08	11:56	18:51	. . .
			6.4	0.5	6.7	. . .
	Th	27	0:28	5:58	12:48	19:37
			3.2	6.5	0.0	6.9
	F	28	1:14	6:42	13:23	20:14
			3.1	6.7	−0.4	7.1
S ○	S	29	1:54	7:22	14:00	20:48
			3.0	6.9	−0.6	7.3
	S	30	2:30	7:58	14:34	21:18
			2.9	7.0	−0.7	7.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:04 2.7	8:34 6.7	15:06 −0.5	21:44 8.1
A	Tu	2	3:40 2.6	9:08 6.7	15:38 −0.4	22:13 8.0
	W	3	4:14 2.5	9:43 6.7	16:11 −0.1	22:43 7.9
	Th	4	4:48 2.3	10:22 6.6	16:46 0.2	23:14 7.7
	F	5	5:28 2.3	11:04 6.5	17:24 0.8	23:49 7.4
	S	6	6:06 2.1	11:49 6.3	18:06 1.4	. . . . .
E	S	7	0:26 7.1	6:52 2.0	12:45 6.1	18:56 2.1
☾	M	8	1:12 6.6	7:46 1.9	13:49 5.9	19:54 2.7
	Tu	9	2:04 6.3	8:52 1.6	15:13 6.0	21:20 3.1
	W	10	3:07 6.1	10:05 1.2	16:48 6.4	22:48 3.2
	Th	11	4:16 6.1	11:12 0.5	18:04 7.2	23:59 3.1
	F	12	5:23 6.3	12:10 −0.2	19:08 7.9	. . . . .
N	S	13	0:56 3.7	6:23 6.6	13:04 −0.9	19:51 8.6
●	S	14	1:45 2.4	7:14 7.0	13:52 −1.5	20:36 9.0
P	M	15	2:31 2.0	8:04 7.4	14:36 −1.8	21:16 9.2
	Tu	16	3:14 1.7	8:51 7.7	15:21 −1.7	21:56 9.2
	W	17	3:56 1.5	9:38 7.8	16:06 −1.4	22:34 8.9
	Th	18	4:39 1.4	10:24 7.6	16:47 −0.7	23:13 8.4
E	F	19	5:22 1.3	11:13 7.2	17:32 0.2	23:50 7.8
	S	20	6:08 1.4	12:06 6.8	18:20 1.8	. . . . .
☽	S	21	0:33 7.2	6:58 1.5	13:07 6.2	19:06 2.3
	M	22	1:17 6.4	8:02 1.7	14:24 5.8	20:22 3.2
	Tu	23	2:10 5.9	9:18 1.7	16:21 5.7	21:52 3.7
	W	24	3:18 5.6	10:36 1.5	18:02 6.1	23:21 3.8
	Th	25	4:36 5.5	11:42 1.1	19:00 6.6	. . . . .
S	F	26	0:27 3.5	5:42 5.7	12:32 0.6	19:38 7.1
	S	27	1:12 3.2	6:34 6.0	13:12 0.2	20:06 7.4
	S	28	1:48 2.8	7:17 6.3	13:47 −0.2	20:31 7.9
○ A	M	29	2:20 2.5	7:53 6.6	14:18 −0.4	20:54 8.1
	Tu	30	2:49 2.2	8:25 6.9	14:48 −0.6	21:19 8.2
	W	31	3:18 1.9	8:57 7.1	15:17 −0.5	21:42 8.3

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:48 1.6	9:29 7.3	15:48 −0.3	22:08 8.2
	F	2	4:17 1.4	10:04 7.3	16:20 0.1	22:36 8.0
E	S	3	4:47 1.3	10:40 7.2	16:52 0.7	23:10 7.6
	S	4	5:21 1.2	11:24 7.0	17:29 1.4	23:41 7.1
	M	5	6:00 1.3	12:06 6.7	18:06 2.2	. . . . .
☾	Tu	6	0:17 6.6	6:52 1.4	13:09 6.3	19:07 3.1
	W	7	1:04 6.1	8:00 1.4	14:39 6.0	20:41 3.7
	Th	8	2:11 5.7	9:29 1.3	16:40 6.3	22:36 3.8
	F	9	3:44 5.6	10:58 0.7	18:05 7.0	23:54 3.4
N	S	10	5:12 5.9	12:00 −0.1	18:58 7.8	. . . . .
	S	11	0:50 2.7	6:18 6.6	12:53 −0.8	19:38 8.5
P	M	12	1:34 2.0	7:11 7.3	13:40 −1.4	20:17 9.0
●	Tu	13	2:14 1.4	8:00 7.9	14:24 −1.7	20:52 9.2
	W	14	2:53 0.8	8:44 8.3	15:04 −1.7	21:27 9.2
	Th	15	3:31 0.5	9:26 8.4	15:44 −1.2	21:59 8.9
E	F	16	4:10 0.3	10:10 8.2	16:21 −0.4	22:34 8.4
	S	17	4:46 0.4	10:52 7.9	17:02 0.5	23:09 7.8
	S	18	5:25 0.6	11:33 7.2	17:43 1.7	23:43 6.9
	M	19	6:11 1.1	12:26 6.4	18:29 2.8	. . . . .
☽	Tu	20	0:18 6.2	7:08 1.6	13:41 5.7	19:30 3.7
	W	21	1:00 5.6	8:30 1.9	16:17 5.5	21:30 3.9
	Th	22	2:21 5.0	9:10 2.0	18:08 6.0	23:30 4.0
S	F	23	4:20 5.0	11:26 1.5	18:52 6.6	. . . . .
	S	24	0:29 3.5	5:40 5.4	12:17 1.0	19:19 7.1
A	S	25	1:02 2.9	6:30 5.9	12:54 0.5	19:41 7.5
	M	26	1:31 2.4	7:07 6.4	13:28 0.0	20:00 7.8
	Tu	27	1:58 1.8	7:40 7.0	13:56 −0.3	20:21 8.1
○	W	28	2:22 1.4	8:10 7.4	14:24 −0.4	20:42 8.3
	Th	29	2:48 1.0	8:40 7.7	14:52 −0.4	21:06 8.3
E	F	30	3:14 0.7	9:10 8.0	15:23 −0.2	21:35 8.2
	S	31	3:43 0.5	9:44 8.1	15:54 0.3	22:00 8.0

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:11 0.5	10:19 7.9	16:26 0.8	22:28 7.5
	M	2	4:42 0.5	10:54 7.6	17:00 1.7	23:00 7.0
	Tu	3	5:21 0.7	11:43 7.0	17:40 2.7	23:32 6.4
☾	W	4	6:14 0.9	12:46 6.5	18:34 3.6	. . . . .
	Th	5	0:16 5.8	7:24 1.3	14:27 6.1	20:34 4.2
N	F	6	1:32 5.3	9:07 1.4	16:44 6.3	22:40 4.1
	S	7	3:40 5.2	10:42 1.0	17:56 7.1	23:50 3.1
	S	8	5:14 5.8	11:50 0.2	18:38 7.8	. . . . .
	M	9	0:36 2.2	6:14 6.8	12:42 −0.6	19:13 8.4
P	Tu	10	1:14 1.3	7:04 7.7	13:26 −1.1	19:48 8.8
●	W	11	1:51 0.5	7:49 8.4	14:04 −1.3	20:20 9.0
E	Th	12	2:27 0.0	8:32 8.8	14:44 −1.0	20:56 8.9
	F	13	3:04 −0.4	9:11 8.9	15:22 −0.6	20:26 8.6
	S	14	3:37 −0.4	9:49 8.7	15:58 0.2	21:54 8.1
	S	15	4:10 −0.2	10:26 8.1	16:32 1.2	22:24 7.5
	M	16	4:48 0.2	11:06 7.4	17:08 2.2	22:53 6.7
	Tu	17	5:30 0.7	11:56 6.6	17:48 3.3	23:26 6.0
☽	W	18	6:21 1.4	13:04 5.9	18:48 4.2	. . . . .
S	Th	19	0:01 5.4	7:38 2.0	15:49 5.5	21:14 4.1
	F	20	1:20 4.6	9:30 2.2	17:41 5.9	23:23 4.1
	S	21	4:11 4.6	10:54 1.8	18:17 6.5	. . . . .
A	S	22	0:10 3.1	7:29 4.6	11:49 1.4	18:38 6.9
	M	23	0:36 2.5	6:14 5.9	12:24 0.9	18:59 7.4
	Tu	24	1:00 1.8	6:49 6.6	12:58 0.5	19:18 7.7
	W	25	1:25 1.2	7:19 7.2	13:28 0.1	19:41 8.0
E ○	Th	26	1:50 0.7	7:49 7.8	14:02 0.0	20:08 8.2
	F	27	2:16 0.3	8:20 8.2	14:30 0.0	20:31 8.2
	S	28	2:44 0.0	8:52 8.5	15:02 0.2	20:58 8.0
	S	29	3:11 −0.3	9:24 8.6	15:33 0.8	21:26 7.8
	M	30	3:41 −0.3	10:00 8.4	16:06 1.5	21:52 7.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽ 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	4:16	10:42	16:42	22:26
			−0.2	7.9	2.3	6.8
	W	2	4:58	11:33	17:26	23:01
			0.1	7.3	3.3	6.2
N	Th	3	5:50	12:40	18:38	23:50
			0.7	6.7	3.9	5.7
☾	F	4	7:04	14:28	20:44	. . .
			1.2	6.3	4.2	. . .
	S	5	1:28	8:52	16:28	22:30
			5.0	1.4	6.5	3.7
	S	6	3:44	10:27	17:26	23:30
			5.2	1.1	7.1	2.6
	M	7	5:10	11:32	18:06	. . .
			6.0	0.6	7.7	. . .
P	Tu	8	0:14	6:06	12:21	18:40
			1.6	7.0	0.1	8.1
E	W	9	0:50	6:54	13:05	19:17
			0.7	7.9	−0.2	8.4
●	Th	10	1:26	7:36	13:45	19:49
			0.0	8.5	−0.3	8.5
	F	11	2:00	8:12	14:22	20:19
			−0.5	8.9	−0.1	8.3
	S	12	2:30	8:49	14:56	20:48
			−0.9	8.9	0.4	8.1
	S	13	3:06	9:29	15:32	21:16
			−0.9	8.7	1.1	7.7
	M	14	3:42	10:07	16:06	21:46
			−0.7	8.1	2.0	7.1
	Tu	15	4:19	10:48	16:42	22:16
			−0.2	7.5	2.8	6.5
S	W	16	4:58	11:32	17:28	22:48
			0.4	6.8	3.5	5.9
	Th	17	5:46	12:34	18:28	23:28
			1.1	6.2	4.2	5.2
☽	F	18	6:48	14:16	20:30	. . .
			1.8	5.8	4.2	. . .
A	S	19	0:44	8:21	16:12	22:28
			4.5	2.2	5.9	3.7
	S	20	3:28	9:54	17:06	23:20
			4.5	2.2	6.2	3.0
	M	21	4:54	10:58	17:39	23:52
			5.1	2.0	6.6	2.2
	Tu	22	5:43	11:42	18:04	. . .
			5.9	1.5	7.0	. . .
	W	23	0:20	6:20	12:24	18:34
			1.5	6.6	1.1	7.3
E	Th	24	0:46	6:54	12:59	19:00
			1.0	7.4	0.9	7.6
	F	25	1:12	7:24	13:32	19:28
			0.8	8.0	0.6	7.8
○	S	26	1:40	7:57	14:06	19:56
			−0.3	8.5	0.7	7.8
	S	27	2:12	8:34	14:40	20:24
			−0.7	8.7	1.0	7.6
	M	28	2:46	9:12	15:16	20:56
			−1.0	8.8	1.5	7.4
	Tu	29	3:22	9:54	15:55	21:30
			−1.0	8.6	2.1	7.1
N	W	30	4:02	10:40	16:40	22:05
			−0.7	8.2	2.8	6.6
	Th	31	4:48	11:33	17:33	22:52
			−0.2	7.6	3.4	6.1

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	5:48	12:40	18:50	23:58
			0.4	7.0	3.8	5.5
☾	S	2	6:57	14:07	20:30	. . .
			1.0	6.6	3.7	. . .
P	S	3	1:34	8:28	15:36	21:58
			5.1	1.5	6.7	2.9
	M	4	3:35	9:54	16:38	22:57
			5.4	1.5	6.9	2.0
	Tu	5	4:57	11:02	17:22	23:42
			6.2	1.3	7.2	1.2
E	W	6	5:52	12:00	18:08	. . .
			7.0	1.0	7.4	. . .
	Th	7	0:20	6:37	12:45	18:40
			0.6	7.8	0.7	7.6
	F	8	0:59	7:21	13:25	19:14
			−0.2	8.3	0.9	7.7
●	S	9	1:35	8:02	14:02	19:47
			−0.7	8.6	1.2	7.7
	S	10	2:12	8:40	14:39	20:17
			−1.0	8.6	1.6	7.5
	M	11	2:47	9:18	15:13	20:47
			−1.1	8.4	2.0	7.3
S	Tu	12	3:23	9:56	15:48	21:20
			−0.9	8.1	2.5	6.9
	W	13	4:00	10:37	16:28	21:52
			−0.4	7.7	3.0	6.4
	Th	14	4:37	11:16	17:12	22:30
			0.1	7.2	3.4	6.0
	F	15	5:18	12:06	18:10	23:15
			0.8	6.7	3.8	5.4
A	S	16	6:08	13:04	19:30	. . .
			1.4	6.3	3.9	. . .
☽	S	17	0:22	7:12	14:13	20:56
			5.0	2.0	6.1	3.5
	M	18	2:04	8:29	15:20	22:02
			4.7	2.3	6.1	2.9
	Tu	19	3:44	9:51	16:13	22:49
			5.0	2.4	6.3	2.2
E	W	20	4:53	10:53	16:58	23:27
			5.7	2.2	6.5	1.6
	Th	21	5:22	11:45	17:39	. . .
			6.5	2.0	6.8	. . .
	F	22	0:08	6:21	12:27	18:15
			0.9	7.2	1.7	7.0
	S	23	0:40	7:08	13:06	18:50
			0.1	7.9	1.5	7.3
	S	24	1:16	7:45	13:49	19:27
			−0.6	8.5	1.6	7.3
○	M	25	1:54	8:27	14:29	20:02
			−1.1	8.9	1.8	7.4
	Tu	26	2:33	9:08	15:10	20:40
			−1.4	9.0	2.1	7.2
N	W	27	3:15	9:58	15:53	21:22
			−1.4	8.9	2.4	7.0
P	Th	28	3:58	10:40	16:43	22:15
			−1.1	8.5	2.7	6.8
	F	29	4:46	11:30	17:35	22:57
			−0.6	8.1	2.9	6.3
	S	30	5:38	12:27	18:40	. . .
			0.0	7.6	3.1	. . .

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:02	6:40	13:28	19:52
			5.9	0.8	7.0	2.8
	M	2	1:25	7:53	14:33	21:05
			5.6	1.5	6.6	2.4
E	Tu	3	3:05	9:13	15:37	22:10
			5.1	2.0	6.6	1.8
	W	4	4:30	10:33	16:35	23:07
			6.2	2.2	6.6	1.3
	Th	5	5:37	11:33	17:24	23:57
			6.7	2.1	6.7	0.5
	F	6	6:33	12:25	18:07	. . .
			7.3	2.1	6.8	. . .
	S	7	0:40	7:20	13:10	18:47
			−0.1	7.8	2.2	6.9
	S	8	1:21	8:02	13:50	19:28
			−0.6	8.1	2.3	7.0
●	M	9	2:00	8:39	14:27	19:58
			−0.9	8.3	2.4	7.0
S	Tu	10	2:35	9:15	15:04	20:32
			−1.0	8.3	2.5	6.9
	W	11	3:10	9:48	15:40	21:07
			−0.8	8.2	2.7	6.8
	Th	12	3:45	10:21	16:18	21:43
			−0.6	7.9	2.8	6.5
	F	13	4:20	10:55	16:58	22:21
			−0.1	7.3	2.9	6.2
A	S	14	4:55	11:32	17:40	23:03
			0.4	7.3	3.0	6.0
	S	15	5:35	12:10	18:28	23:55
			0.9	7.0	3.0	5.6
	M	16	6:20	12:53	19:22	. . .
			1.6	6.7	2.8	. . .
☽	Tu	17	0:57	7:15	13:42	20:24
E			5.4	2.2	6.4	2.6
	W	18	2:18	8:27	14:39	21:28
			5.3	2.7	6.2	2.2
	Th	19	3:40	9:45	15:42	22:30
			5.6	2.9	6.1	1.6
	F	20	4:55	10:55	16:42	23:24
			6.1	2.8	6.2	0.9
	S	21	6:00	11:58	17:37	. . .
			6.9	2.7	6.4	. . .
	S	22	0:14	6:58	12:52	18:28
			0.1	7.7	2.5	6.7
	M	23	1:00	7:40	13:38	19:08
			−0.6	8.4	2.3	7.0
N	Tu	24	1:44	8:23	14:24	19:53
○			−1.2	8.9	2.1	7.2
	W	25	2:27	9:07	15:06	20:37
			−1.6	9.2	2.0	7.4
P	Th	26	3:11	9:48	15:49	21:22
			−1.7	9.2	2.0	7.4
	F	27	3:54	10:30	16:33	22:08
			−1.5	8.9	2.0	7.3
	S	28	4:41	11:13	17:20	22:57
			−1.0	8.5	2.0	7.0
	S	29	5:25	11:56	18:11	23:54
			−0.2	8.0	2.0	6.6
E	M	30	6:15	12:42	19:04	. . .
			0.7	7.4	2.0	. . .
☾	Tu	31	1:00	7:13	13:31	20:07
			6.2	1.7	6.8	1.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.							
	M	1	8:24	18:05						
			2.8	−0.3						
	Tu	2	8:40	18:30						
			2.6	−0.6						
	W	3	9:06	19:02						
			2.9	−0.8						
N	Th	4	9:43	19:39						
☽			3.1	−0.9						
	F	5	10:20	20:18						
			3.2	−0.9						
	S	6	10:57	20:56						
			3.1	−0.8						
	S	7	11:30	21:32						
			2.9	−0.6						
	M	8	11:54	22:00						
			2.5	−0.4						
	Tu	9	12:00	22:21						
			2.1	−0.1						
E	W	10	11:05	22:29						
			1.7	0.1						
☾	Th	11	9:07	22:00						
			1.7	0.3						
	F	12	8:29	18:24						
			1.8	0.2						
	S	13	8:28	17:45						
			2.0	−0.1						
	S	14	8:39	17:56						
			2.2	−0.4						
	M	15	8:53	18:18						
			2.3	−0.5						
	Tu	16	9:09	18:42						
			2.3	−0.6						
S	W	17	9:23	19:09						
			2.3	−0.6						
A	Th	18	9:38	19:34						
			2.4	−0.5						
●	F	19	9:54	19:54						
			2.4	−0.4						
	S	20	10:12	20:12						
			2.4	−0.4						
	S	21	10:32	20:28						
			2.4	−0.3						
	M	22	10:46	20:41						
			2.3	−0.2						
	Tu	23	11:00	20:53						
			2.1	−0.1						
	W	24	10:56	21:08						
			1.9	0.1						
E	Th	25	10:24	21:00						
			1.6	0.3						
	F	26	9:01	19:55						
			1.5	0.4						
☽	S	27	7:55	17:32						
			1.6	0.2						
	S	28	7:30	16:47						
			1.8	−0.1						
	M	29	7:34	16:54						
			2.1	−0.4						
	Tu	30	7:55	17:18						
			2.5	−0.7						
N	W	31	8:24	17:50						
			2.8	−0.8						

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.							
	Th	1	8:59	18:24						
			3.0	−0.9						
P	F	2	9:34	18:56						
			3.0	−0.8						
○	S	3	10:09	19:24						
			3.0	−0.7						
	S	4	10:42	19:48						
			2.8	−0.4						
	M	5	11:07	20:00						
			2.4	−0.2						
E	Tu	6	11:20	20:01						
			2.0	0.1						
	W	7	10:58	19:45						
			1.6	0.3						
	Th	8	9:02	18:40						
			1.4	0.3						
	F	9	7:15	16:57						
			1.5	0.2						
☾	S	10	7:18	16:23						
			1.7	−0.1						
	S	11	7:40	16:29						
			1.9	−0.3						
	M	12	8:03	16:49						
			2.0	−0.4						
S	Tu	13	8:28	17:13						
			2.1	−0.5						
A	W	14	8:48	17:39						
			2.1	−0.5						
	Th	15	9:06	18:03						
			2.2	−0.4						
	F	16	9:23	18:24						
			2.2	−0.3						
	S	17	9:38	18:39						
			2.2	−0.2						
●	S	18	9:51	18:48						
			2.2	−0.1						
	M	19	10:06	18:44						
			2.1	0.0						
	Tu	20	10:22	18:41						
			1.9	0.1						
E	W	21	10:31	18:35						
			1.7	0.3						
	Th	22	10:25	18:10						
			1.4	0.4						
	F	23	2:36	4:04	9:06	17:18				
			1.1	1.0	1.2	0.4				
	S	24	4:34	15:59						
			1.3	0.2						
	S	25	5:24	15:31						
			1.6	−0.1						
☽	M	26	6:05	15:40						
			1.9	−0.4						
	Tu	27	6:45	16:03						
			2.2	−0.7						
N	W	28	7:27	16:32						
			2.5	−0.8						
	Th	29	8:05	17:04						
			2.7	−0.8						

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.							
P	F	1	8:42	17:33						
			2.7	−0.6						
	S	2	9:17	17:55						
			2.6	−0.4						
○	S	3	9:52	18:06						
			2.4	−0.2						
	M	4	0:47	2:14	10:18	18:11				
			0.7	0.6	2.1	0.1				
E	Tu	5	0:27	3:39	10:38	17:59				
			0.8	0.7	1.7	0.3				
	W	6	0:32	4:58	10:37	17:34				
			1.1	0.8	1.3	0.4				
	Th	7	0:57	7:07	9:09	16:33				
			1.3	1.0	1.1	0.4				
	F	8	1:22	15:20						
			1.4	0.2						
	S	9	2:00	14:58						
			1.5	−0.1						
	S	10	5:05	14:59						
			1.6	−0.3						
☾	M	11	6:25	15:20						
			1.7	−0.4						
S	Tu	12	7:13	15:41						
			1.8	−0.4						
A	W	13	7:47	16:05						
			1.9	−0.4						
	Th	14	8:13	16:28						
			1.9	−0.3						
	F	15	8:32	16:48						
			1.9	−0.2						
	S	16	8:49	16:59						
			1.9	−0.1						
	S	17	9:03	17:00	23:56					
			1.8	0.1	0.9					
	M	18	2:19	9:20	16:58	23:23				
			0.8	1.7	0.2	1.0				
●	Tu	19	3:15	9:41	16:48	23:13				
E			0.8	1.5	0.3	1.1				
	W	20	4:14	9:58	16:34	23:19				
			0.8	1.3	0.4	1.3				
	Th	21	5:24	10:10	16:10	23:31				
			0.7	1.0	0.4	1.5				
	F	22	7:45	9:15	15:21	23:55				
			0.6	0.7	0.4	1.7				
	S	23	14:13							
			0.1							
	S	24	0:34	13:55						
			1.8	−0.2						
	M	25	1:50	14:14						
			1.9	−0.5						
N	Tu	26	4:25	14:42						
☽			2.0	−0.7						
	W	27	5:49	15:12						
			2.2	−0.7						
	Th	28	6:48	15:42						
			2.3	−0.7						
P	F	29	7:37	16:08						
			2.3	−0.5						
	S	30	8:17	16:25	23:28					
			2.1	−0.2	0.9					
	S	31	1:47	8:53	16:31	23:00				
			0.8	1.9	0.0	1.0				

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 0.9 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Batavia Mean Local Civil for the meridian 106° 53′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.: E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	3:10	9:26	16:25	22:55
			0.8	1.5	0.3	1.2
○	Tu	2	4:30	9:53	16:03	23:00
			0.7	1.1	0.4	1.5
	W	3	6:01	10:07	15:20	23:11
			0.7	0.8	0.5	1.7
	Th	4	14:05	23:26	. . .	. . .
			0.3	1.8	. . .	. . .
	F	5	12:53	23:40	. . .	. . .
			0.1	1.9	. . .	. . .
	S	6	12:54	23:43	. . .	. . .
			−0.1	1.9	. . .	. . .
	S	7	13:13	23:41	. . .	. . .
			−0.3	1.8	. . .	. . .
S	M	8	13:38	23:23	. . .	. . .
			−0.3	1.7	. . .	. . .
☾	Tu	9	14:05	23:09	. . .	. . .
			−0.4	1.6	. . .	. . .
A	W	10	2:39	5:40	14:32	23:03
			1.5	1.6	−0.4	1.5
	Th	11	2:25	6:35	14:55	23:05
			1.4	1.6	−0.3	1.4
	F	12	2:30	7:10	15:12	23:05
			1.3	1.6	−0.2	1.3
	S	13	2:42	7:38	15:22	22:53
			1.2	1.5	0.0	1.3
	S	14	2:59	7:59	15:22	22:32
			1.1	1.4	0.1	1.3
	M	15	3:30	8:22	15:12	22:13
			1.0	1.2	0.3	1.3
E	Tu	16	4:12	8:51	14:58	22:05
			0.8	1.0	0.4	1.5
●	W	17	5:10	9:24	14:35	22:12
			0.6	0.8	0.4	1.8
	Th	18	6:25	10:12	13:57	22:27
			0.4	0.5	0.4	2.0
	F	19	8:20	22:53	. . .	. . .
			0.2	2.2	. . .	. . .
	S	20	11:05	23:28	. . .	. . .
			−0.1	2.3	. . .	. . .
	S	21	11:48	. . .	. . .	. . .
			−0.3	. . .	. . .	. . .
N	M	22	0:12	12:32	. . .	. . .
			2.3	−0.6	. . .	. . .
P	Tu	23	1:13	13:11	. . .	. . .
			2.3	−0.7	. . .	. . .
☽	W	24	2:50	13:47	. . .	. . .
			2.2	−0.7	. . .	. . .
	Th	25	4:36	14:17	. . .	. . .
			2.1	−0.6	. . .	. . .
	F	26	5:52	14:41	23:23	. . .
			1.9	−0.4	1.3	. . .
	S	27	1:55	6:50	14:53	22:23
			1.3	1.7	−0.1	1.3
E	S	28	2:54	7:40	14:54	22:08
			1.0	1.3	0.1	1.4
	M	29	4:22	8:23	14:34	22:02
			0.8	1.0	0.4	1.6
	Tu	30	6:00	9:14	13:42	22:04
			0.6	0.7	0.4	1.9

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	8:25	22:07	. . .	. . .
			0.8	2.0	. . .	. . .
	Th	2	9:34	22:20	. . .	. . .
			0.0	2.2	. . .	. . .
	F	3	10:12	22:34	. . .	. . .
			−0.2	2.2	. . .	. . .
	S	4	10:43	22:46	. . .	. . .
			−0.3	2.2	. . .	. . .
S	S	5	11:16	23:00	. . .	. . .
			−0.4	2.1	. . .	. . .
	M	6	11:50	23:05	. . .	. . .
			−0.4	2.0	. . .	. . .
	Tu	7	12:24	23:06	. . .	. . .
			−0.4	1.8	. . .	. . .
A	W	8	12:53	22:38	. . .	. . .
			−0.4	1.7	. . .	. . .
☾	Th	9	13:18	22:20	. . .	. . .
			−0.3	1.6	. . .	. . .
	F	10	13:40	22:08	. . .	. . .
			−0.2	1.6	. . .	. . .
	S	11	13:58	21:55	. . .	. . .
			−0.1	1.6	. . .	. . .
	S	12	13:52	21:40	. . .	. . .
			0.1	1.6	. . .	. . .
E	M	13	13:38	21:24	. . .	. . .
			0.3	1.7	. . .	. . .
	Tu	14	5:48	7:00	13:07	21:17
			0.5	0.6	0.4	1.8
	W	15	6:28	9:40	12:18	21:20
			0.3	0.5	0.4	2.1
	Th	16	7:13	21:37	. . .	. . .
			0.0	2.3	. . .	. . .
●	F	17	7:58	22:04	. . .	. . .
			−0.2	2.6	. . .	. . .
	S	18	8:47	22:38	. . .	. . .
			−0.5	2.7	. . .	. . .
N	S	19	9:45	23:22	. . .	. . .
P			−0.6	2.7	. . .	. . .
	M	20	10:40	. . .	. . .	. . .
			−0.7	. . .	. . .	. . .
	Tu	21	0:08	11:30	. . .	. . .
			2.7	−0.8	. . .	. . .
	W	22	0:55	12:12	. . .	. . .
			2.5	−0.7	. . .	. . .
☽	Th	23	1:40	12:46	. . .	. . .
			2.2	−0.6	. . .	. . .
	F	24	2:17	13:12	22:37	. . .
			1.8	−0.4	1.5	. . .
	S	25	13:23	21:35	. . .	. . .
			−0.1	1.6	. . .	. . .
E	S	26	13:15	21:20	. . .	. . .
			0.2	1.7	. . .	. . .
	M	27	12:33	21:17	. . .	. . .
			0.4	1.9	. . .	. . .
	Tu	28	7:24	21:22	. . .	. . .
			0.1	2.1	. . .	. . .
	W	29	7:45	21:26	. . .	. . .
			−0.2	2.3	. . .	. . .
	Th	30	8:15	21:37	. . .	. . .
			−0.4	2.3	. . .	. . .
○	F	31	8:42	21:50	. . .	. . .
			−0.5	2.4	. . .	. . .

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	9:10	22:10	. . .	. . .
			−0.5	2.4	. . .	. . .
S	S	2	9:35	22:30	. . .	. . .
			−0.5	2.3	. . .	. . .
	M	3	10:08	22:48	. . .	. . .
			−0.5	2.2	. . .	. . .
A	Tu	4	10:37	23:08	. . .	. . .
			−0.4	2.1	. . .	. . .
	W	5	11:06	23:02	. . .	. . .
			−0.4	2.0	. . .	. . .
	Th	6	11:35	22:33	. . .	. . .
			−0.3	1.8	. . .	. . .
	F	7	12:00	21:54	. . .	. . .
			−0.2	1.7	. . .	. . .
☾	S	8	12:18	21:23	. . .	. . .
			−0.1	1.7	. . .	. . .
E	S	9	12:20	21:00	. . .	. . .
			0.1	1.7	. . .	. . .
	M	10	12:03	20:44	. . .	. . .
			0.3	1.8	. . .	. . .
	Tu	11	10:50	20:35	. . .	. . .
			0.3	2.0	. . .	. . .
	W	12	6:34	20:37	. . .	. . .
			0.0	2.2	. . .	. . .
	Th	13	6:40	20:53	. . .	. . .
			−0.3	2.5	. . .	. . .
	F	14	7:03	21:24	. . .	. . .
			−0.5	2.7	. . .	. . .
●	S	15	7:38	21:56	. . .	. . .
			−0.7	2.9	. . .	. . .
N	S	16	8:15	22:38	. . .	. . .
P			−0.8	3.0	. . .	. . .
	M	17	9:00	23:20	. . .	. . .
			−0.9	2.9	. . .	. . .
	Tu	18	9:43	23:58	. . .	. . .
			−0.8	2.7	. . .	. . .
	W	19	10:25	. . .	. . .	. . .
			−0.7	. . .	. . .	. . .
	Th	20	0:28	11:02	. . .	. . .
			2.4	−0.5	. . .	. . .
	F	21	0:37	11:27	22:48	. . .
			2.0	−0.2	1.6	. . .
☽	S	22	11:38	20:53	. . .	. . .
E			0.0	1.6	. . .	. . .
	S	23	11:24	20:30	. . .	. . .
			0.3	1.8	. . .	. . .
	M	24	7:03	20:33	. . .	. . .
			0.2	2.0	. . .	. . .
	Tu	25	6:22	20:43	. . .	. . .
			−0.1	2.2	. . .	. . .
	W	26	6:38	20:53	. . .	. . .
			−0.4	2.3	. . .	. . .
	Th	27	7:03	21:08	. . .	. . .
			−0.6	2.4	. . .	. . .
	F	28	7:30	21:22	. . .	. . .
			−0.6	2.4	. . .	. . .
S	S	29	7:55	21:38	. . .	. . .
○			−0.6	2.4	. . .	. . .
	S	30	8:18	22:00	. . .	. . .
			−0.6	2.3	. . .	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 0.9 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Batavia Mean Local Civil for the meridian 106° 53′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.							
	M	1	8:37	22:20						
			−0.5	2.3						
A	Tu	2	9:00	22:38						
			−0.4	2.2						
	W	3	9:18	22:50						
			−0.4	2.1						
	Th	4	9:44	22:45						
			−0.3	1.9						
	F	5	10:06	22:12						
			−0.1	1.8						
	S	6	10:22	21:13						
			0.0	1.7						
E	S	7	10:20	20:28						
☾			0.2	1.7						
	M	8	9:34	20:00						
			0.3	1.8						
	Tu	9	6:02	19:50						
			0.2	2.0						
	W	10	5:28	19:53						
			−0.1	2.2						
	Th	11	5:37	20:12						
			−0.4	2.5						
	F	12	6:00	20:38						
			−0.7	2.8						
N	S	13	6:30	21:15						
			−0.8	2.9						
●	S	14	7:03	21:53						
			−0.9	3.0						
P	M	15	7:38	22:33						
			−0.9	3.0						
	Tu	16	8:10	23:06						
			−0.8	2.8						
	W	17	8:40	23:34						
			−0.6	2.5						
	Th	18	9:04	23:47						
			−0.3	2.0						
E	F	19	9:18	23:05						
			−0.1	1.6						
	S	20	9:13	20:14						
			0.2	1.5						
☽	S	21	8:05	19:25						
			0.3	1.7						
	M	22	5:33	19:33						
			0.1	2.0						
	Tu	23	5:05	19:52						
			−0.2	2.1						
	W	24	5:20	20:15						
			−0.5	2.2						
	Th	25	5:40	20:35						
			−0.6	2.3						
S	F	26	6:08	20:55						
			−0.7	2.3						
	S	27	6:35	21:13						
			−0.6	2.3						
	S	28	7:00	21:28						
			−0.5	2.3						
○	M	29	7:17	21:44						
A			−0.4	2.2						
	Tu	30	7:30	22:00						
			−0.3	2.2						
	W	31	7:38	22:15						
			−0.2	2.0						

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.							
	Th	1	7:45	22:23						
			−0.1	1.9						
	F	2	7:48	22:14						
			0.0	1.7						
E	S	3	7:44	21:23						
			0.2	1.5						
	S	4	7:16	19:45						
			0.3	1.5						
	M	5	6:00	18:52						
			0.3	1.6						
☾	Tu	6	4:35	18:39						
			0.1	1.8						
	W	7	4:15	18:58						
			−0.2	2.0						
	Th	8	4:23	19:17						
			−0.5	2.4						
N	F	9	4:45	19:48						
			−0.7	2.6						
	S	10	5:13	20:25						
			−0.8	2.8						
	S	11	5:44	21:00						
			−0.9	2.9						
P	M	12	6:15	21:40						
			−0.8	2.8						
●	Tu	13	6:44	22:13						
			−0.7	2.7						
	W	14	7:02	22:42						
			−0.4	2.3						
E	Th	15	7:13	23:08						
			−0.1	1.9						
	F	16	7:12	14:50	16:20	22:46				
			0.1	0.9	0.8	1.4				
	S	17	6:46	15:35						
			0.3	1.2						
	S	18	5:40	16:40						
			0.3	1.5						
☽	M	19	4:08	17:38						
			0.1	1.7						
	Tu	20	3:43	18:27						
			−0.2	1.9						
	W	21	3:54	19:08						
			−0.5	2.0						
S	Th	22	4:14	19:43						
			−0.6	2.1						
	F	23	4:38	20:10						
			−0.6	2.1						
	S	24	5:04	20:32						
			−0.5	2.0						
A	S	25	5:26	20:48						
			−0.4	2.0						
	M	26	5:45	21:00						
			−0.3	2.0						
	Tu	27	5:55	21:13						
			−0.2	1.9						
○	W	28	5:55	21:25						
			0.0	1.8						
	Th	29	5:53	21:36						
			0.1	1.6						
E	F	30	5:42	13:13	15:28	21:38				
			0.2	1.1	1.0	1.4				
	S	31	5:28	13:00	16:56	21:10				
			0.3	1.1	1.0	1.2				

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.							
	S	1	5:00	13:08						
			0.3	1.3						
	M	2	4:08	13:37						
			0.3	1.5						
	Tu	3	3:13	15:13						
			0.1	1.6						
☾	W	4	2:55	16:52						
			−0.3	1.9						
	Th	5	3:05	17:52						
			−0.5	2.1						
N	F	6	3:27	18:40						
			−0.7	2.3						
	S	7	3:55	19:24						
			−0.8	2.5						
	S	8	4:25	20:02						
			−0.8	2.6						
	M	9	4:53	20:40						
			−0.7	2.5						
P	Tu	10	5:13	21:15						
			−0.5	2.3						
●	W	11	5:25	12:00	14:30	21:45				
			−0.2	0.8	0.7	1.9				
E	Th	12	5:27	11:50	16:00	22:10				
			0.1	1.0	0.8	1.5				
	F	13	5:14	12:00	17:42	22.08				
			0.3	1.2	0.8	1.0				
	S	14	4:43	12:20						
			0.3	1.5						
	S	15	3:40	12:45						
			0.3	1.7						
	M	16	2:30	13:15						
			0.0	1.8						
	Tu	17	2:14	13:53						
			−0.3	1.8						
☽	W	18	2:25	16:40						
			−0.5	1.8						
S	Th	19	2:45	18:05						
			−0.6	1.8						
	F	20	3:10	12:32	13:20	18:55				
			−0.6	1.5	1.4	1.8				
	S	21	3:34	12:30	13:40	19:28				
			−0.5	1.4	1.3	1.8				
A	S	22	3:58	12:40	14:05	19:50				
			−0.4	1.3	1.2	1.8				
	M	23	4:10	12:48	13:40	20:08				
			−0.3	1.2	1.1	1.7				
	Tu	24	4:20	12:25	14:25	20:15				
			−0.1	1.1	1.0	1.6				
	W	25	4:15	11:45	15:10	20:25				
			0.1	1.1	1.0	1.4				
E	Th	26	4:05	11:18	15:56	20:37				
○			0.2	1.2	1.0	1.3				
	F	27	3:48	11:03	17:02	20:46				
			0.3	1.4	0.9	1.0				
	S	28	3:35	11:06	18:55	20:25				
			0.3	1.6	0.7	0.8				
	S	29	3:05	11:15						
			0.3	1.7						
	M	30	2:26	11:34						
			0.2	1.9						

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 0.9 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Batavia Mean Local Civil for the meridian 106° 53′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:35	12:05	. . . . .	
			−0.1	2.0	. . . . .	
	W	2	1:28	12:58	. . . . .	
			−0.3	2.0	. . . . .	
N	Th	3	1:44	14:43	. . . . .	
			−0.6	2.1	. . . . .	
☾	F	4	2:11	16:42	. . . . .	
			−0.8	2.2	. . . . .	
	S	5	2:38	17:53	. . . . .	
			−0.9	2.3	. . . . .	
	S	6	3:05	18:44	. . . . .	
			−0.8	2.2	. . . . .	
	M	7	3:30	19:27	. . . . .	
			−0.6	2.1	. . . . .	
P	Tu	8	3:44	11:12	13:44	20:08
			−0.4	1.1	1.0	1.8
E	W	9	3:48	10:43	15:14	20:44
			−0.1	1.2	0.9	1.4
●	Th	10	3:42	10:37	16:44	21:08
			0.2	1.4	0.8	1.0
	F	11	3:20	10:43	18:43	21:05
			0.3	1.7	0.6	0.7
	S	12	2:35	10:55	. . . . .	
			0.3	1.9	. . . . .	
	S	13	1:17	11:15	. . . . .	
			0.1	2.1	. . . . .	
	M	14	0:22	11:35	. . . . .	
			−0.1	2.2	. . . . .	
	Tu	15	0:25	11:48	. . . . .	
			−0.4	2.1	. . . . .	
S	W	16	0:48	11:55	. . . . .	
			−0.5	2.0	. . . . .	
	Th	17	1:15	11:47	. . . . .	
			−0.6	1.9	. . . . .	
☽	F	18	1:40	11:22	. . . . .	
			−0.6	1.7	. . . . .	
A	S	19	2:03	11:02	15:10	17:18
			−0.5	1.6	1.5	1.6
	S	20	2:25	10:55	15:14	18:10
			−0.4	1.6	1.4	1.5
	M	21	2:40	10:52	15:46	18:33
			−0.3	1.5	1.3	1.4
	Tu	22	2:52	10:45	16:12	18:50
			−0.1	1.5	1.2	1.3
E	W	23	2:45	10:32	16:57	19:15
			0.0	1.5	1.0	1.1
	Th	24	2:28	10:15	. . . . .	
			0.2	1.6	. . . . .	
	F	25	2:06	10:02	. . . . .	
			0.3	1.7	. . . . .	
○	S	26	1:37	10:05	. . . . .	
			0.3	1.9	. . . . .	
	S	27	1:03	10:16	. . . . .	
			0.2	2.2	. . . . .	
	M	28	0:05	10:38	23:32	. . .
			0.0	2.3	−0.2	. . .
	Tu	29	11:12	23:45	. . . . .	
			2.5	−0.5	. . . . .	
N	W	30	11:48	. . . . .		
			2.5	. . . . .		
	Th	31	0:15	12:40	. . . . .	
			−0.7	2.5	. . . . .	

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	0:45	13:45	. . . . .	
			−0.8	2.3	. . . . .	
☾	S	2	1:18	15:15	. . . . .	
			−0.9	2.2	. . . . .	
P	S	3	1:48	16:42	. . . . .	
			−0.8	2.0	. . . . .	
	M	4	2:10	17:45	. . . . .	
			−0.6	1.7	. . . . .	
	Tu	5	2:23	10:20	14:50	18:35
			−0.3	1.4	1.2	1.3
E	W	6	2:24	9:57	16:35	19:16
			0.0	1.6	0.8	0.9
	Th	7	2:05	9:48	. . . . .	
			0.2	1.8	. . . . .	
	F	8	1:22	9:52	23:17	. . .
			0.3	2.0	0.1	. . .
●	S	9	10:00	21:43	. . . . .	
			2.2	−0.2	. . . . .	
	S	10	10:20	22:06	. . . . .	
			2.4	−0.4	. . . . .	
	M	11	10:38	22:35	. . . . .	
			2.5	−0.5	. . . . .	
S	Tu	12	10:58	23:05	. . . . .	
			2.4	−0.6	. . . . .	
	W	13	11:14	23:35	. . . . .	
			2.3	−0.6	. . . . .	
	Th	14	11:28	. . . . .		
			2.2	. . . . .		
	F	15	0:06	11:24	. . . . .	
			−0.6	2.0	. . . . .	
A	S	16	0:34	10:58	. . . . .	
			−0.5	1.9	. . . . .	
☽	S	17	1:00	10:28	. . . . .	
			−0.5	1.8	. . . . .	
	M	18	1:17	10:12	. . . . .	
			−0.3	1.8	. . . . .	
	Tu	19	1:27	9:57	. . . . .	
			−0.2	1.8	. . . . .	
E	W	20	1:25	9:46	. . . . .	
			0.0	1.8	. . . . .	
	Th	21	1:04	9:33	. . . . .	
			0.2	1.8	. . . . .	
	F	22	0:27	9:23	21:25	. . .
			0.2	2.0	0.2	. . .
	S	23	9:23	20:55	. . . . .	
			2.2	0.0	. . . . .	
○	S	24	9:35	20:44	. . . . .	
			2.4	−0.3	. . . . .	
	M	25	9:58	21:08	. . . . .	
			2.6	−0.5	. . . . .	
	Tu	26	10:30	21:45	. . . . .	
			2.8	−0.7	. . . . .	
N	W	27	11:08	22:30	. . . . .	
			2.9	−0.8	. . . . .	
P	Th	28	11:48	23:13	. . . . .	
			2.8	−0.8	. . . . .	
	F	29	12:30	23:53	. . . . .	
			2.7	−0.8	. . . . .	
	S	30	13:10	. . . . .		
			2.4	. . . . .		

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:24	13:37	. . . . .	
			−0.7	2.1	. . . . .	
	M	2	0:50	12:00	. . . . .	
			−0.5	1.7	. . . . .	
E	Tu	3	1:02	9:50	. . . . .	
			−0.2	1.6	. . . . .	
	W	4	1:00	9:21	. . . . .	
			0.0	1.8	. . . . .	
	Th	5	0:30	9:13	19:53	. . .
			0.2	2.0	0.1	. . .
	F	6	9:18	19:40	. . . . .	
			2.3	−0.2	. . . . .	
	S	7	9:30	20:03	. . . . .	
			2.4	−0.5	. . . . .	
	S	8	9:45	20:34	. . . . .	
			2.5	−0.6	. . . . .	
●	M	9	10:04	21:00	. . . . .	
			2.6	−0.6	. . . . .	
S	Tu	10	10:24	21:30	. . . . .	
			2.6	−0.6	. . . . .	
	W	11	10:43	22:02	. . . . .	
			2.5	−0.6	. . . . .	
	Th	12	11:04	22:30	. . . . .	
			2.4	−0.5	. . . . .	
	F	13	11:14	22:58	. . . . .	
			2.3	−0.5	. . . . .	
A	S	14	11:16	23:23	. . . . .	
			2.1	−0.4	. . . . .	
	S	15	10:55	23:45	. . . . .	
			2.0	−0.3	. . . . .	
	M	16	10:11	. . . . .		
			1.9	. . . . .		
☽ E	Tu	17	0:02	9:34	. . . . .	
			−0.1	1.8	. . . . .	
	W	18	0:03	9:12	23:42	. . .
			0.1	1.8	0.2	. . .
	Th	19	9:00	22:15	. . . . .	
			1.9	0.3	. . . . .	
	F	20	8:48	18:56	. . . . .	
			2.0	0.0	. . . . .	
	S	21	8:48	18:54	. . . . .	
			2.3	−0.3	. . . . .	
	S	22	9:00	18:09	. . . . .	
			2.5	−0.5	. . . . .	
	M	23	9:24	19:36	. . . . .	
			2.8	−0.7	. . . . .	
N ○	Tu	24	9:55	20:11	. . . . .	
			2.9	−0.8	. . . . .	
	W	25	10:30	20:48	. . . . .	
			3.1	−0.8	. . . . .	
P	Th	26	11:04	21:28	. . . . .	
			3.1	−0.8	. . . . .	
	F	27	11:44	22:09	. . . . .	
			2.9	−0.7	. . . . .	
	S	28	12:11	22:44	. . . . .	
			2.6	−0.5	. . . . .	
	S	29	12:30	23:10	. . . . .	
			2.2	−0.3	. . . . .	
E	M	30	11:54	23:25	. . . . .	
			1.8	0.0	. . . . .	
☾	Tu	31	9:32	23:14	. . . . .	
			1.6	0.2	. . . . .	

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 0.9 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Batavia Mean Local Civil for the meridian 106° 53′ E.; 0ʰ is midnight, 12ʰ is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					
	M	1	2:01	18:20				
			0.8	3.1				
	Tu	2	3:41	19:26				
			−0.3	3.5				
	W	3	4:50	20:33				
			−0.8	3.9				
N ○ P	Th	4	5:41	21:35				
			−1.3	4.3				
	F	5	6:25	22:33				
			−1.6	4.5				
	S	6	7:07	23:26				
			−1.6	4.5				
	S	7	7:44	15:05	16:13			
			−1.5	1.3	1.2			
	M	8	0:19	8:19	14:57	17:54		
			4.3	−1.2	1.3	1.1		
	Tu	9	1:10	8:50	15:10	19:10		
			4.0	−0.7	1.5	0.9		
E	W	10	2:00	9:17	15:30	20:23		
			3.4	−0.2	1.8	0.8		
☾	Th	11	2:51	9:34	15:51	21:41		
			2.8	0.4	2.1	0.7		
	F	12	3:48	9:37	16:15	23:14		
			2.0	0.8	2.4	0.6		
	S	13	5:07	9:12	16:46			
			1.4	1.0	2.8			
	S	14	1:14	17:25				
			0.4	3.0				
	M	15	3:39	18:17				
			0.0	3.2				
	Tu	16	4:44	19:22				
			−0.3	3.3				
S	W	17	5:23	20:27				
A			−0.6	3.4				
	Th	18	5:51	21:25				
			−0.8	3.5				
●	F	19	6:16	22:15				
			−0.8	3.6				
	S	20	6:39	23:02				
			−0.9	3.6				
	S	21	7:04	14:11	16:21	23:42		
			−0.8	1.5	1.4	3.6		
	M	22	7:31	14:08	17:26			
			−0.7	1.5	1.2			
	Tu	23	0:21	7:55	14:19	18:20		
			3.5	−0.4	1.6	1.0		
	W	24	1:00	8:19	14:30	19:08		
			3.3	−0.2	1.7	0.8		
E	Th	25	1:39	8:35	14:40	20:05		
			3.0	0.2	1.9	0.6		
	F	26	2:19	8:47	14:54	21:07		
			2.6	0.5	2.3	0.5		
☽	S	27	3:05	8:50	15:13	22:26		
			2.0	0.8	2.6	0.4		
	S	28	4:07	8:41	15:45			
			1.4	0.9	3.0			
	M	29	0:10	6:58	7:51	16:31		
			0.2	1.0	0.9	3.4		
	Tu	30	2:16	17:34				
			−0.2	3.7				
N	W	31	3:55	18:58				
			−0.7	3.9				

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					
	Th	1	4:52	20:14				
			−1.1	4.1				
P	F	2	5:35	21:26				
			−1.3	4.2				
○	S	3	6:12	22:29				
			−1.4	4.2				
	S	4	6:44	18:45	15:52	23:27		
			−1.2	1.3	1.2	4.1		
	M	5	7:14	13:35	17:29			
			−0.9	1.5	0.9			
E	Tu	6	0:20	7:40	13:46	18:36		
			3.8	−0.5	1.8	0.6		
	W	7	1:12	8:00	14:04	19:40		
			3.3	0.0	2.1	0.4		
	Th	8	2:02	8:13	14:26	20:43		
			2.7	0.4	2.5	0.2		
	F	9	2:54	8:19	14:47	21:51		
			2.1	0.7	2.8	0.2		
☾	S	10	3:52	8:05	15:12	23:12		
			1.4	0.9	3.1	0.1		
	S	11	5:20	7:29	15:42			
			1.0	0.9	3.3			
	M	12	1:00	16:18				
			0.0	3.3				
	Tu	13	3:21	17:08				
			−0.2	3.3				
S	W	14	4:22	18:25				
A			−0.4	3.2				
	Th	15	4:56	19:54				
			−0.5	3.2				
	F	16	5:23	21:04				
			−0.6	3.2				
	S	17	5:44	22:02				
			−0.6	3.2				
●	S	18	6:06	18:10	15:53	22:51		
			−0.5	1.5	1.4	3.2		
	M	19	6:31	12:57	16:59	23:35		
			−0.4	1.6	1.1	3.2		
	Tu	20	6:51	13:05	17:48			
			−0.2	1.8	0.8			
E	W	21	0:18	7:11	13:14	18:37		
			3.1	0.1	2.0	0.5		
	Th	22	1:00	7:28	13:26	19:26		
			2.8	0.4	2.3	0.3		
	F	23	1:45	7:37	13:42	20:21		
			2.4	0.6	2.6	0.1		
	S	24	2:33	7:37	14:00	21:25		
			1.9	0.9	3.0	−0.1		
	S	25	3:33	7:31	14:30	22:48		
			1.4	1.0	3.4	−0.2		
☽	M	26	5:19	7:04	15:08			
			1.0	0.9	3.7			
	Tu	27	0:20	15:57				
			−0.4	3.9				
N	W	28	2:10	17:00				
			−0.6	3.9				
	Th	29	3:34	18:37				
			−0.9	3.9				

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					
P	F	1	4:28	20:00				
			−1.0	3.8				
	S	2	5:07	21:20				
			−1.0	3.8				
○	S	3	5:38	12:32	15:18	22:28		
			−0.8	1.4	1.3	3.6		
	M	4	6:04	12:16	16:53	23:30		
			−0.5	1.6	0.8	3.3		
E	Tu	5	6:27	12:26	17:57			
			−0.1	2.0	0.4			
	W	6	0:24	6:44	12:44	18:56		
			2.9	0.4	2.4	0.0		
	Th	7	1:19	6:57	13:05	19:53		
			2.4	0.7	2.9	−0.2		
	F	8	2:11	7:00	13:29	20:50		
			1.9	0.9	3.2	−0.3		
	S	9	3:09	6:53	13:54	21:50		
			1.4	1.0	3.5	−0.3		
	S	10	4:19	6:32	14:21	22:56		
			1.1	1.0	3.6	−0.3		
☾	M	11	14:50					
			3.6					
S	Tu	12	0:16	15:26				
			−0.3	3.5				
A	W	13	1:53	16:10				
			−0.3	3.3				
	Th	14	3:10	17:16				
			−0.3	3.1				
	F	15	3:52	19:05				
			−0.3	2.9				
	S	16	4:25	20:37				
			−0.2	2.8				
	S	17	4:50	12:10	15:10	21:45		
			−0.2	1.6	1.5	2.8		
	M	18	5:15	11:22	16:22	22:41		
			0.0	1.8	1.2	2.7		
●	Tu	19	5:37	11:50	17:12	23:32		
E			0.2	2.0	0.8	2.6		
	W	20	5:56	12:00	18:02			
			0.4	2.2	0.3			
	Th	21	0:22	6:12	12:14	18:50		
			2.4	0.7	2.6	0.0		
	F	22	1:13	6:20	12:34	19:42		
			2.1	0.9	3.0	−0.4		
	S	23	2:09	6:21	12:55	20:37		
			1.8	1.1	3.5	−0.6		
	S	24	3:14	6:18	13:23	21:40		
			1.3	1.1	3.8	−0.8		
	M	25	14:00	22:51				
			4.1	−0.8				
N ☽	Tu	26	14:42					
			4.2					
	W	27	0:11	15:32				
			−0.9	4.1				
	Th	28	1:35	16:35				
			−0.9	3.9				
P	F	29	2:44	18:04				
			−0.8	3.6				
	S	30	3:35	19:48				
			−0.7	3.2				
	S	31	4:14	11:18	14:37	21:18		
			−0.4	1.5	1.4	2.9		

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	4:40	11:00	16:12	22:34
			0.0	1.9	0.9	2.6
○	Tu	2	5:02	11:09	17:22	23:38
			0.4	2.3	0.2	2.3
	W	3	5:18	11:27	18:18	. . .
			0.8	2.8	—0.2	. . .
	Th	4	0:41	5:27	11:51	19:11
			2.0	1.1	3.2	—0.5
	F	5	1:38	5:29	12:18	20:00
			1.6	1.2	3.6	—0.7
	S	6	2:40	5:15	12:45	20:51
			1.3	1.2	3.9	—0.8
	S	7	3:58	5:08	13:13	21:41
			1.2	1.1	4.0	—0.8
S	M	8	13:43	22:34	. . . .	. . . .
			3.9	—0.7	. . . .	. . . .
☾	Tu	9	14:18	23:30	. . . .	. . . .
			3.8	—0.5	. . . .	. . . .
A	W	10	14:46	. . . .	. . . .	. . . .
			3.5	. . . .	. . . .	. . . .
	Th	11	0:26	15:23	. . . .	. . . .
			—0.4	3.2	. . . .	. . . .
	F	12	1:24	16:13	. . . .	. . . .
			—0.2	2.9	. . . .	. . . .
	S	13	2:15	17:41	. . . .	. . . .
			—0.1	2.5	. . . .	. . . .
	S	14	3:56	10:14	18:44	19:51
			0.1	1.7	1.5	2.3
	M	15	3:31	10:27	15:29	21:20
			0.3	1.9	1.3	2.2
E	Tu	16	3:59	10:31	16:31	22:31
			0.5	2.1	0.8	2.0
●	W	17	4:21	10:45	17:25	23:37
			0.8	2.5	0.3	1.9
	Th	18	4:36	11:08	18:15	. . .
			1.0	2.9	—0.2	. . .
	F	19	0:38	4:45	11:24	19:05
			1.7	1.2	3.4	—0.7
	S	20	1:45	4:46	11:51	19:58
			1.5	1.3	3.9	—1.0
	S	21	3:00	4:31	12:28	20:51
			1.3	1.2	4.2	—1.3
N	M	22	12:59	21:47	. . . .	. . . .
			4.5	—1.4	. . . .	. . . .
P	Tu	23	13:40	22:47	. . . .	. . . .
			4.6	—1.3	. . . .	. . . .
☽	W	24	14:25	23:48	. . . .	. . . .
			4.4	—1.2	. . . .	. . . .
	Th	25	15:14	. . . .	. . . .	. . . .
			4.1	. . . .	. . . .	. . . .
	F	26	0:46	16:14	. . . .	. . . .
			—0.9	3.6	. . . .	. . . .
	S	27	1:40	17:40	. . . .	. . . .
			—0.6	3.0	. . . .	. . . .
E	S	28	2:22	9:45	13:27	19:33
			—0.1	1.7	1.5	2.4
	M	29	2:54	9:35	15:34	21:18
			0.3	2.0	1.0	2.0
	Tu	30	3:17	10:00	16:53	22:51
			0.8	2.5	0.3	1.6

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	3:29	10:12	17:53	. . .
			1.1	3.0	—0.3	. . .
	Th	2	0:12	3:20	10:38	18:40
			1.4	1.2	3.5	—0.7
	F	3	1:37	3:13	11:10	19:26
			1.4	1.3	3.9	—1.0
	S	4	11:39	20:09	. . . .	. . . .
			4.1	—1.1	. . . .	. . . .
S	S	5	12:08	20:49	. . . .	. . . .
			4.2	—1.2	. . . .	. . . .
	M	6	12:43	21:30	. . . .	. . . .
			4.2	—1.1	. . . .	. . . .
	Tu	7	13:14	22:06	. . . .	. . . .
			4.1	—0.9	. . . .	. . . .
A	W	8	13:44	22:47	. . . .	. . . .
			3.8	—0.7	. . . .	. . . .
☾	Th	9	14:15	23:26	. . . .	. . . .
			3.5	—0.5	. . . .	. . . .
	F	10	14:50	. . . .	. . . .	. . . .
			3.1	. . . .	. . . .	. . . .
	S	11	0:05	15:30	. . . .	. . . .
			—0.3	2.7	. . . .	. . . .
	S	12	0:44	16:24	. . . .	. . . .
			0.0	2.2	. . . .	. . . .
E	M	13	1:21	8:50	14:10	18:20
			1.3	1.9	1.5	1.8
	Tu	14	1:51	9:03	15:46	20:55
			0.6	2.2	1.0	1.5
	W	15	2:12	9:21	16:50	22:40
			0.9	2.7	0.4	1.3
	Th	16	2:20	9:45	17:42	. . .
			1.1	3.1	—0.3	. . .
●	F	17	0:14	2:17	10:14	18:30
			1.3	1.2	3.7	—0.8
	S	18	10:47	19:20	. . . .	. . . .
			4.2	—1.3	. . . .	. . . .
N	S	19	11:24	20:07	. . . .	. . . .
			4.6	—1.6	. . . .	. . . .
P	M	20	12:06	20:55	. . . .	. . . .
			4.9	—1.8	. . . .	. . . .
	Tu	21	12:46	21:40	. . . .	. . . .
			4.9	—1.7	. . . .	. . . .
	W	22	13:30	22:27	. . . .	. . . .
			4.7	—1.5	. . . .	. . . .
☽	Th	23	14:15	23:10	. . . .	. . . .
			4.3	—1.1	. . . .	. . . .
	F	24	15:04	23:50	. . . .	. . . .
			3.7	—0.7	. . . .	. . . .
	S	25	16:00	. . . .	. . . .	. . . .
			3.0	. . . .	. . . .	. . . .
E	S	26	0:24	7:48	11:39	17:10
			—0.1	1.7	1.5	2.2
	M	27	0:50	8:00	14:38	19:21
			0.4	2.2	1.1	1.5
	Tu	28	1:02	8:26	16:39	21:51
			0.8	2.7	0.5	1.1
	W	29	1:32	8:57	17:38	. . .
			1.0	3.2	—0.2	. . .
	Th	30	9:29	18:22	. . . .	. . . .
			3.6	—0.7	. . . .	. . . .
○	F	31	10:00	19:00	. . . .	. . . .
			4.0	—1.0	. . . .	. . . .

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	10:40	19:33	. . . .	. . . .
			4.2	—1.3	. . . .	. . . .
S	S	2	11:15	20:05	. . . .	. . . .
			4.4	—1.3	. . . .	. . . .
	M	3	11:50	20:36	. . . .	. . . .
			4.4	—1.3	. . . .	. . . .
A	Tu	4	12:25	21:07	. . . .	. . . .
			4.3	—1.2	. . . .	. . . .
	W	5	12:57	21:35	. . . .	. . . .
			4.1	—1.0	. . . .	. . . .
	Th	6	13:27	22:00	. . . .	. . . .
			3.8	—0.8	. . . .	. . . .
	F	7	14:00	22:34	. . . .	. . . .
			3.4	—0.5	. . . .	. . . .
☾	S	8	14:30	23:00	. . . .	. . . .
			3.0	—0.2	. . . .	. . . .
E	S	9	6:40	8:50	15:00	23:22
			1.7	1.5	2.5	0.1
	M	10	6:58	11:25	15:39	23:35
			1.9	1.6	1.9	0.4
	Tu	11	7:20	14:19	16:20	23:38
			2.3	1.2	1.3	0.6
	W	12	7:48	16:30	21:00	23:24
			2.7	0.6	0.9	0.8
	Th	13	8:20	17:20	. . . .	. . . .
			3.2	—0.1	. . . .	. . . .
	F	14	9:00	18:01	. . . .	. . . .
			3.8	—0.8	. . . .	. . . .
●	S	15	9:42	18:42	. . . .	. . . .
			4.3	—1.3	. . . .	. . . .
N	S	16	10:26	19:24	. . . .	. . . .
			4.8	—1.7	. . . .	. . . .
P	M	17	11:11	20:03	. . . .	. . . .
			5.0	—1.9	. . . .	. . . .
	Tu	18	11:58	20:43	. . . .	. . . .
			5.1	—1.9	. . . .	. . . .
	W	19	12:42	21:20	. . . .	. . . .
			5.0	—1.7	. . . .	. . . .
	Th	20	13:27	21:55	. . . .	. . . .
			4.6	—1.3	. . . .	. . . .
	F	21	14:13	22:25	. . . .	. . . .
			3.9	—0.8	. . . .	. . . .
☽	S	22	5:31	7:51	14:57	22:50
E			1.4	1.3	3.2	—0.2
	S	23	5:49	10:06	15:40	23:05
			1.8	1.4	2.3	0.3
	M	24	6:16	12:39	16:30	23:00
			2.3	1.2	1.4	0.6
	Tu	25	6:51	16:56	19:34	21:30
			2.7	0.6	0.8	0.7
	W	26	7:40	17:34	. . . .	. . . .
			3.2	—0.1	. . . .	. . . .
	Th	27	8:15	18:07	. . . .	. . . .
			3.6	—0.6	. . . .	. . . .
	F	28	8:58	18:36	. . . .	. . . .
			3.9	—0.9	. . . .	. . . .
S	S	29	9:42	19:00	. . . .	. . . .
○			4.2	—1.2	. . . .	. . . .
	S	30	10:23	19:28	. . . .	. . . .
			4.3	—1.3	. . . .	. . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:08	9:15	13:26	21:11
			9.1	−0.5	6.6	0.6
A	Tu	2	1:38	9:50	14:06	21:50
			9.0	−0.6	6.6	0.6
	W	3	2:26	10:29	14:47	22:30
			9.0	−0.5	6.5	0.8
	Th	4	3:06	11:07	15:30	23:06
			8.8	−0.2	6.4	1.0
	F	5	3:48	11:45	16:15	23:45
			8.4	0.1	6.3	1.3
	S	6	4:32	12:23	17:05	. . .
			8.0	0.5	6.1	. . .
E	S	7	0:24	5:21	13:00	18:03
			1.7	7.4	0.9	6.1
☾	M	8	1:09	6:21	13:41	19:15
			2.0	6.8	1.3	6.2
	Tu	9	2:04	7:32	14:26	20:22
			2.2	6.2	1.6	6.6
	W	10	3:22	8:41	15:25	21:20
			2.3	6.1	1.9	7.2
	Th	11	4:56	9:42	16:54	22:11
			1.9	6.1	1.9	7.9
	F	12	6:07	10:33	18:00	23:00
			1.2	6.2	1.7	8.6
N	S	13	7:00	11:25	18:55	23:50
			0.4	6.5	1.2	9.2
●	S	14	7:48	12:11	19:43	. . .
			−0.4	6.7	0.8	. . .
P	M	15	0:30	8:32	12:55	20:29
			9.8	−1.0	6.9	0.3
	Tu	16	1:16	9:14	13:40	21:12
			10.1	−1.3	7.0	0.0
	W	17	2:00	9:56	14:25	21:55
			10.2	−1.4	7.1	−0.2
	Th	18	2:44	10:37	15:10	22:38
			9.9	−1.3	7.0	−0.1
E	F	19	3:30	11:18	16:00	23:24
			9.4	−1.0	6.9	0.2
	S	20	4:18	12:00	16:48	. . .
			8.6	−0.5	6.8	. . .
☽	S	21	0:10	5:06	12:42	17:48
			0.6	7.7	0.1	6.7
	M	22	1:01	6:05	13:25	19:00
			1.1	6.8	0.8	6.6
	Tu	23	2:08	7:14	14:17	20:18
			1.7	6.0	1.3	6.7
	W	24	3:21	8:29	15:25	21:13
			2.0	5.5	1.8	7.0
	Th	25	4:49	9:29	16:45	22:04
			1.8	5.4	1.9	7.3
S	F	26	6:00	10:22	17:55	22:50
			1.3	5.4	1.6	7.7
	S	27	6:49	11:09	18:47	23:35
			0.7	5.7	1.2	8.1
	S	28	7:34	11:50	19:33	. . .
			0.1	6.0	0.9	. . .
○ A	M	29	0:13	8:15	12:33	20:14
			8.5	−0.3	6.4	0.5
	Tu	30	0:52	8:50	13:10	20:52
			8.8	−0.6	6.7	0.3
	W	31	1:30	9:28	13:50	21:30
			9.1	−0.7	7.0	0.2

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:07	10:05	14:28	22:07
			9.1	−0.7	7.1	0.3
	F	2	2:46	10:40	15:08	22:43
			9.0	−0.5	7.2	0.5
E	S	3	3:25	11:15	15:48	23:20
			8.7	−0.1	7.2	0.8
	S	4	4:05	11:48	16:30	23:57
			8.2	0.3	7.1	1.2
	M	5	4:48	12:22	17:18	. . .
			7.5	0.8	6.9	. . .
☾	Tu	6	0:38	5:37	12:55	18:18
			1.5	6.8	1.3	6.8
	W	7	1:27	6:40	13:30	19:27
			1.9	6.1	1.8	6.8
	Th	8	2:35	7:58	14:17	20:40
			2.1	5.6	2.2	7.1
	F	9	4:25	9:15	16:05	21:44
			2.0	5.5	2.4	7.6
N	S	10	5:48	10:15	17:40	22:40
			1.2	5.7	2.0	8.3
	S	11	6:43	11:08	18:38	23:30
			0.3	6.1	1.3	9.0
P	M	12	7:30	11:57	19:27	. . .
			−0.5	6.5	0.6	. . .
●	Tu	13	0:18	8:13	12:40	20:12
			9.6	−1.1	7.0	−0.1
	W	14	1:00	8:52	13:24	20:55
			10.0	−1.5	7.4	−0.5
	Th	15	1:43	9:32	14:05	21:37
			10.0	−1.6	7.8	−0.8
E	F	16	2:26	10:10	14:48	22:20
			9.8	−1.4	7.9	−0.7
	S	17	3:07	10:48	15:30	23:00
			9.2	−1.0	7.9	−0.4
	S	18	3:48	11:30	16:14	23:48
			8.4	−0.4	7.7	0.2
	M	19	4:30	12:07	17:00	. . .
			7.4	0.3	7.3	. . .
☽	Tu	20	0:35	5:18	12:47	17:57
			0.9	6.4	1.1	6.9
	W	21	1:30	6:18	13:35	19:10
			1.5	5.5	1.7	6.6
S	Th	22	2:43	7:44	14:38	20:32
			2.0	4.9	2.3	6.5
	F	23	4:20	9:07	16:18	21:38
			2.0	4.8	2.5	6.8
	S	24	5:35	10:07	17:35	22:30
			1.5	5.0	2.0	7.2
A	S	25	6:28	10:55	18:30	23:14
			0.8	5.5	1.4	7.7
	M	26	7:12	11:36	19:14	23:55
			0.2	6.0	0.8	8.2
	Tu	27	7:50	12:15	19:53	. . .
			−0.3	6.6	0.3	. . .
○	W	28	0:33	8:27	12:52	20:32
			8.6	−0.6	7.2	0.0
	Th	29	1:10	9:00	13:30	21:08
			9.0	−0.8	7.6	−0.2
E	F	30	1:47	9:35	14:05	21:44
			9.1	−0.7	8.0	−0.2
	S	31	2:23	10:08	14:42	22:20
			9.0	−0.5	8.2	0.0

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:00	10:40	15:18	22:57
			8.7	−0.1	8.2	0.3
	M	2	3:37	11:13	15:57	23:35
			8.2	0.4	8.0	0.7
	Tu	3	4:18	11:45	16:40	. . .
			7.4	1.0	7.7	. . .
☾	W	4	0:15	5:00	12:18	17:30
			1.1	6.6	1.6	7.3
	Th	5	1:05	6:00	12:52	18:40
			1.6	5.7	2.1	7.0
N	F	6	2:15	7:26	13:45	20:06
			1.9	5.1	2.5	7.0
	S	7	4:00	8:57	15:43	21:24
			1.8	5.0	2.7	7.4
	S	8	5:27	10:07	17:22	22:23
			1.1	5.4	2.1	8.1
	M	9	6:22	11:00	18:22	23:14
			0.2	6.1	1.2	8.8
P	Tu	10	7:08	11:43	19:10	. . .
			−0.6	6.8	0.3	. . .
●	W	11	0:00	7:48	12:25	19:55
			9.3	−1.1	7.5	−0.5
E	Th	12	0:43	8:27	13:05	20:37
			9.6	−1.4	8.2	−1.0
	F	13	1:24	9:08	13:44	21:19
			9.6	−1.4	8.6	−1.1
	S	14	2:02	9:40	14:23	22:00
			9.3	−1.2	8.8	−1.0
	S	15	2:40	10:17	15:00	22:40
			8.7	−0.7	8.8	−0.6
	M	16	3:20	10:55	15:40	23:25
			8.0	−0.1	8.5	0.0
	Tu	17	3:57	11:30	16:22	. . .
			7.1	0.6	8.0	. . .
☽	W	18	0:12	4:40	12:14	17:08
			0.7	6.1	1.4	7.3
S	Th	19	1:08	5:32	13:00	18:10
			1.4	5.3	2.1	6.6
	F	20	2:10	6:58	14:05	19:43
			2.0	4.6	2.7	6.3
	S	21	3:42	8:50	15:47	21:12
			2.1	4.5	2.8	6.4
A	S	22	5:06	10:00	17:12	22:10
			1.6	5.0	2.3	6.9
	M	23	6:00	10:42	18:07	22:55
			0.9	5.6	1.5	7.4
	Tu	24	6:43	11:20	18:52	23:38
			0.3	6.3	0.8	7.9
	W	25	7:20	11:54	19:30	. . .
			−0.2	7.1	0.2	. . .
E ○	Th	26	0:10	7:57	12:30	20:08
			8.4	−0.5	7.7	−0.2
	F	27	0:48	8:30	13:05	20:45
			8.7	−0.6	8.4	−0.5
	S	28	1:22	9:04	13:40	21:22
			8.8	−0.4	8.8	−0.5
	S	29	1:57	9:37	14:15	21:58
			8.7	−0.3	9.0	−0.4
	M	30	2:34	10:10	15:00	22:36
			8.4	0.1	9.0	−0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	0:39	7:55	14:23	18:31
			3.0	−0.3	1.7	1.1
	W	2	1:10	8:57	15:22	18:28
			3.3	−0.3	1.2	1.0
N	Th	3	1:49	10:10	16:54	18:14
			3.6	−0.3	0.9	0.8
☾	F	4	2:35	11:39	. . . . .	
			3.8	−0.3	. . . . .	
	S	5	3:34	13:20	. . . . .	
			3.9	−0.4	. . . . .	
	S	6	4:48	14:50	. . . . .	
			3.8	−0.4	. . . . .	
	M	7	6:18	15:44	. . . . .	
			3.6	−0.3	. . . . .	
P	Tu	8	7:49	16:21	22:15	. . .
			3.5	−0.1	1.0	. . .
E	W	9	1:06	9:07	16:46	22:14
			0.9	3.3	0.2	1.3
●	Th	10	3:10	10:17	17:06	22:32
			0.5	3.1	0.6	1.8
	F	11	4:26	11:20	17:22	22:56
			0.1	2.8	0.9	2.3
	S	12	5:30	12:17	17:36	23:24
			−0.3	2.5	1.2	2.8
	S	13	6:27	13:10	17:44	23:55
			−0.5	2.1	1.3	3.2
	M	14	7:21	14:02	17:50	. . .
			−0.6	1.7	1.3	. . .
	Tu	15	0:28	8:15	14:56	17:49
			3.5	−0.6	1.4	1.2
S	W	16	1:04	9:09	15:55	17:51
			3.6	−0.5	1.1	1.0
	Th	17	1:43	10:05	. . . . .	
			3.6	−0.3	. . . . .	
☽	F	18	2:23	11:07	. . . . .	
			3.5	−0.1	. . . . .	
A	S	19	3:10	12:14	. . . . .	
			3.2	0.1	. . . . .	
	S	20	4:06	13:30	. . . . .	
			2.9	0.3	. . . . .	
	M	21	5:32	14:33	. . . . .	
			2.7	0.4	. . . . .	
	Tu	22	7:04	15:15	21:22	. . .
			2.5	0.6	1.3	. . .
	W	23	1:10	8:28	15:45	21:31
			1.2	2.4	0.7	1.5
E	Th	24	2:44	9:35	16:10	21:48
			0.9	2.4	0.9	1.8
	F	25	3:47	10:34	16:32	22:08
			0.5	2.3	1.1	2.1
○	S	26	4:41	11:27	16:48	22:30
			0.2	2.3	1.2	2.5
	S	27	5:32	12:20	17:00	22:56
			−0.2	2.1	1.4	2.9
	M	28	6:23	13:12	17:05	23:27
			−0.5	1.9	1.4	3.3
	Tu	29	7:15	14:09	17:06	. . .
			−0.8	1.6	1.4	. . .
N	W	30	0:08	8:09	15:12	17:07
			3.7	−0.9	1.3	1.2
	Th	31	0:42	9:07	. . . . .	
			4.0	−0.9	. . . . .	
NOVEMBER.						
	F	1	1:26	10:07	. . . . .	
			4.1	−0.8	. . . . .	
☾	S	2	2:17	11:11	. . . . .	
			4.1	−0.6	. . . . .	
P	S	3	3:16	12:21	. . . . .	
			3.8	−0.4	. . . . .	
	M	4	4:28	13:22	. . . . .	
			3.4	0.0	. . . . .	
	Tu	5	6:01	14:16	20:20	. . .
			3.0	0.3	1.2	. . .
E	W	6	0:18	7:42	14:54	20:32
			1.0	2.6	0.7	1.6
	Th	7	2:25	9:16	15:20	21:00
			0.6	2.4	1.1	2.1
	F	8	3:48	10:43	15:38	21:31
			0.1	2.1	1.4	2.6
●	S	9	4:55	11:55	15:51	22:05
			−0.4	1.9	1.6	3.1
	S	10	5:51	13:01	15:58	22:42
			−0.7	1.7	1.6	3.5
	M	11	6:44	14:02	15:54	23:20
			−1.0	1.6	1.5	3.7
S	Tu	12	7:28	23:58	. . . . .	
			−1.0	3.9	. . . . .	
	W	13	8:12	. . . . .		
			−1.0	. . . . .		
	Th	14	0:35	8:54	. . . . .	
			3.8	−0.8	. . . . .	
	F	15	1:15	9:34	. . . . .	
			3.7	−0.5	. . . . .	
A	S	16	1:54	10:14	. . . . .	
			3.4	−0.2	. . . . .	
☽	S	17	2:34	10:57	17:46	19:51
			3.1	0.1	1.2	1.1
	M	18	3:22	11:37	18:22	21:09
			2.7	0.4	1.3	1.2
	Tu	19	4:20	12:22	18:57	23:16
			2.4	0.6	1.5	1.2
E	W	20	5:53	13:06	18:30	. . .
			2.0	0.9	1.7	. . .
	Th	21	1:26	7:52	13:45	20:00
			1.0	1.8	1.1	2.0
	F	22	2:54	9:31	14:11	20:32
			0.7	1.7	1.4	2.3
	S	23	4:00	10:56	14:35	21:02
			0.2	1.7	1.5	2.7
	S	24	4:56	12:11	14:35	21:38
			−0.3	1.7	1.6	3.2
○	M	25	5:47	22:17	. . . . .	
			−0.7	3.6	. . . . .	
	Tu	26	6:37	23:00	. . . . .	
			−1.1	4.0	. . . . .	
N	W	27	7:35	23:43	. . . . .	
			−1.3	4.3	. . . . .	
P	Th	28	8:12	. . . . .		
			−1.4	. . . . .		
	F	29	0:31	9:00	. . . . .	
			4.4	−1.3	. . . . .	
	S	30	1:20	9:47	. . . . .	
			4.3	−1.0	. . . . .	
DECEMBER.						
☾	S	1	2:11	10:38	17:19	19:12
			4.0	−0.6	1.1	1.0
	M	2	3:06	11:16	17:40	20:50
			3.5	−0.1	1.2	1.0
E	Tu	3	4:13	11:56	18:06	23:00
			2.9	0.4	1.5	0.9
	W	4	5:45	12:26	18:39	. . .
			2.8	0.9	1.9	. . .
	Th	5	1:15	7:49	12:42	19:16
			0.7	1.8	1.3	2.4
	F	6	3:06	10:32	12:00	19:58
			0.2	1.6	1.5	2.8
	S	7	4:27	20:43	. . . . .	
			−0.3	3.3	. . . . .	
	S	8	5:25	21:29	. . . . .	
			−0.8	3.6	. . . . .	
●	M	9	6:11	22:13	. . . . .	
			−1.0	3.8	. . . . .	
S	Tu	10	6:49	23:58	. . . . .	
			−1.2	3.9	. . . . .	
	W	11	7:25	23:40	. . . . .	
			−1.2	3.9	. . . . .	
	Th	12	8:00	. . . . .		
			−1.0	. . . . .		
	F	13	0:20	8:31	15:26	17:31
			3.8	−0.8	1.3	1.2
A	S	14	1:59	9:00	15:41	18:30
			3.6	−0.5	1.4	1.2
	S	15	1:37	9:26	16:02	19:30
			3.3	−0.2	1.5	1.1
	M	16	2:15	9:54	16:24	20:32
			2.9	0.1	1.6	1.1
☽	Tu	17	2:49	10:19	16:48	21:43
E			2.6	0.4	1.7	1.1
	W	18	3:33	10:34	17:10	23:19
			2.1	0.7	1.9	1.0
	Th	19	4:37	10:41	17:42	. . .
			1.7	1.0	2.2	. . .
	F	20	1:17	7:23	10:35	18:18
			0.8	1.3	1.2	2.5
	S	21	3:01	18:09	. . . . .	
			0.3	2.9	. . . . .	
	S	22	4:16	20:06	. . . . .	
			−0.2	3.3	. . . . .	
	M	23	5:11	21:00	. . . . .	
			−0.7	3.7	. . . . .	
N	Tu	24	5:57	21:56	. . . . .	
○			−1.1	4.1	. . . . .	
	W	25	6:40	22:45	. . . . .	
			−1.4	4.4	. . . . .	
P	Th	26	7:22	23:38	. . . . .	
			−1.5	4.5	. . . . .	
	F	27	8:01	. . . . .		
			−1.5	. . . . .		
	S	28	0:29	8:39	15:25	17:45
			4.4	−1.2	1.1	1.0
	S	29	1:20	9:13	15:34	19:03
			4.1	−0.8	1.3	0.9
E	M	30	2:10	9:45	15:59	20:23
			3.6	−0.3	1.5	0.8
☾	Tu	31	3:04	10:10	16:19	21:52
			2.9	0.3	1.9	0.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0ʰ is midnight, 12ʰ is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:51 1.2	9:20 12.4	15:22 3.5	21:25 12.7
	Tu	2	3:47 0.4	10:22 13.0	16:21 3.4	22:21 13.1
	W	3	4:41 −0.4	11:17 13.7	17:17 3.0	23:15 13.7
N ○ P	Th	4	5:33 −1.2	12:09 14.4	18:09 2.6	. . . . .
	F	5	0:07 14.2	6:25 −1.8	13:00 14.9	18:58 2.1
	S	6	0:57 14.5	7:14 −2.0	13:45 15.2	19:47 1.7
	S	7	1:47 14.7	8:03 −2.0	14:32 15.4	20:35 1.4
	M	8	2:38 14.7	8:53 −1.5	15:18 15.3	21:24 1.2
	Tu	9	3:29 14.4	9:42 −0.8	16:04 15.0	22:13 1.1
E	W	10	4:22 13.9	10:35 0.2	16:51 14.5	23:05 1.2
☾	Th	11	5:17 13.3	11:26 1.3	17:40 13.8	23:54 1.4
	F	12	6:11 12.7	12:20 2.2	18:30 13.2	. . . . .
	S	13	0:50 1.6	7:15 12.1	13:17 3.2	19:25 12.7
	S	14	1:48 1.6	8:20 11.7	14:20 3.9	20:22 12.4
	M	15	2:47 1.6	9:27 11.6	15:25 4.3	21:22 12.3
	Tu	16	3:42 1.4	10:28 11.7	16:27 4.3	22:17 12.4
S	W	17	4:35 1.1	11:20 12.1	17:21 4.1	23:09 12.6
A	Th	18	5:22 0.7	12:05 12.6	18:08 3.8	23:56 12.8
●	F	19	6:06 0.3	12:45 13.1	18:49 3.4	. . . . .
	S	20	0:41 13.0	6:48 0.0	13:22 13.6	19:28 3.0
	S	21	1:21 13.1	7:31 −0.2	13:59 14.0	20:08 2.6
	M	22	2:00 13.2	8:11 −0.2	14:36 14.3	20:40 2.2
	Tu	23	2:40 13.2	8:52 0.0	15:13 14.4	21:18 1.8
	W	24	3:21 13.2	9:32 0.5	15:51 14.2	21:58 1.6
E	Th	25	4:08 13.1	10:13 1.1	16:28 13.8	22:41 1.4
	F	26	4:49 12.9	10:57 1.8	17:10 13.3	23:25 1.4
☽	S	27	5:36 12.7	11:44 2.5	17:57 13.8	. . . . .
	S	28	0:15 1.4	6:34 12.3	12:35 3.3	18:47 12.4
	M	29	1:12 1.4	7:38 12.0	13:36 3.9	19:45 12.1
	Tu	30	2:15 1.2	8:48 12.0	14:46 4.3	20:50 12.2
N	W	31	3:17 0.8	9:57 12.4	15:57 4.1	21:55 12.6

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:20 0.2	11:00 13.0	17:02 3.5	22:57 13.3
P	F	2	5:17 −0.5	11:55 13.7	17:57 2.7	23:55 14.1
○	S	3	6:10 −1.2	12:44 14.5	18:47 1.8	. . . . .
	S	4	0:48 14.7	7:00 −1.6	13:30 15.1	19:34 1.0
	M	5	1:38 15.2	7:49 −1.7	14:14 15.5	20:20 0.4
E	Tu	6	2:27 15.4	8:38 −1.4	14:55 15.6	21:08 0.0
	W	7	3:15 15.1	9:24 −0.8	15:38 15.4	21:49 0.0
	Th	8	4:01 14.8	10:10 0.1	16:20 14.8	22:34 0.2
	F	9	4:47 13.9	10:54 1.2	17:05 14.1	23:20 0.6
☾	S	10	5:38 13.1	11:42 2.4	17:50 13.2	. . . . .
	S	11	0:10 1.2	6:35 12.2	12:33 3.6	18:41 12.4
	M	12	1:05 1.7	7:37 11.4	13:34 4.5	19:39 11.8
	Tu	13	2:05 2.1	8:47 11.0	14:47 4.9	20:43 11.5
S A	W	14	3:07 2.2	9:57 11.1	16:00 4.9	21:48 11.6
	Th	15	4:04 2.0	10:54 11.5	17:01 4.5	22:47 12.0
	F	16	4:58 1.5	11:41 12.2	17:49 3.8	23:38 12.5
	S	17	5:45 1.0	12:22 13.0	18:30 3.1	. . . . .
●	S	18	0:28 13.0	6:30 0.4	12:59 13.7	19:07 2.3
	M	19	1:05 13.5	7:13 0.0	13:34 14.3	19:41 1.6
	Tu	20	1:44 13.9	7:52 −0.1	14:09 14.6	20:16 1.0
E	W	21	2:22 14.2	8:30 −0.1	14:45 14.8	20:52 0.6
	Th	22	3:01 14.2	9:08 0.3	15:21 14.6	21:30 0.3
	F	23	3:42 14.2	9:48 0.7	15:58 14.1	22:12 0.4
	S	24	4:22 13.9	10:27 1.6	16:37 13.5	22:54 0.6
	S	25	5:10 13.3	11:10 2.5	17:18 12.9	23:43 0.9
☽	M	26	6:06 12.7	12:01 3.5	18:08 12.2	. . . . .
	Tu	27	0:40 1.2	7:10 12.1	13:03 4.2	19:10 11.7
N	W	28	1:45 1.4	8:24 11.7	14:21 4.6	20:23 11.8
	Th	29	2:58 1.3	9:38 11.9	15:40 4.3	21:39 12.3

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:00 0.9	10:43 12.6	16:48 3.5	22:46 13.2
	S	2	5:02 0.2	11:37 13.5	17:42 2.8	23:43 14.1
○	S	3	5:56 −0.4	12:28 14.4	18:30 1.2	. . . . .
	M	4	0:35 15.0	6:45 −0.9	13:07 15.1	19:15 0.1
E	Tu	5	1:25 15.5	7:34 −1.1	13:48 15.6	19:57 −0.6
	W	6	2:10 15.7	8:18 −1.0	14:32 15.7	20:38 −0.8
	Th	7	2:52 15.6	9:00 −0.4	15:10 15.3	21:20 −0.8
	F	8	3:35 15.0	9:40 0.5	15:48 14.7	22:01 −0.4
	S	9	4:19 14.2	10:22 1.6	16:29 13.9	22:43 0.2
	S	10	5:07 13.3	11:06 2.7	17:12 12.9	23:32 1.0
☾	M	11	5:57 12.3	11:58 3.8	18:00 11.9	. . . . .
S	Tu	12	0:25 1.9	6:57 11.4	12:58 4.7	18:59 11.2
A	W	13	1:25 2.5	8:05 10.9	14:11 5.1	20:10 10.9
	Th	14	2:30 2.8	9:16 10.9	15:30 5.0	21:22 11.1
	F	15	3:33 2.7	10:18 11.4	16:33 4.4	22:25 11.6
	S	16	4:30 2.2	11:07 12.2	17:20 3.5	23:17 12.4
	S	17	5:22 1.5	11:50 13.0	18:00 2.5	. . . . .
	M	18	0:01 13.2	6:07 0.9	12:27 13.8	18:35 1.5
● E	Tu	19	0:42 13.9	6:49 0.4	13:08 14.4	19:11 0.6
	W	20	1:21 14.5	7:27 0.1	13:40 14.7	19:47 0.0
	Th	21	2:00 14.9	8:05 0.0	14:15 14.8	20:23 −0.5
	F	22	2:37 15.1	8:44 0.4	14:50 14.6	21:02 −0.6
	S	23	3:18 15.0	9:21 1.0	15:25 14.1	21:43 −0.5
	S	24	4:03 14.5	10:01 1.8	16:04 13.5	22:27 −0.1
	M	25	4:50 13.8	10:47 2.7	16:48 12.7	23:17 0.5
N ☽	Tu	26	5:47 13.0	11:40 3.6	17:42 12.0	. . . . .
	W	27	0:15 1.2	6:52 12.2	12:47 4.3	18:50 11.5
	Th	28	1:23 1.7	8:05 11.8	14:08 4.5	20:10 11.6
P	F	29	2:35 1.8	9:16 12.0	15:27 3.9	21:28 12.2
	S	30	3:43 1.5	10:20 12.6	16:28 2.8	22:32 13.1
	S	31	4:45 1.0	11:12 13.5	17:20 1.6	23:28 14.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 7.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	5:39	11:56	18:06	. . .
			0.4	14.3	0.5	. . .
○	Tu	2	0:18	6:28	12:42	18:50
			14.8	−0.1	15.0	−0.4
	W	3	1:03	7:13	13:22	19:30
			15.4	−0.2	15.3	−1.1
	Th	4	1:46	7:58	14:00	20:10
			15.7	0.0	15.3	−1.3
	F	5	2:28	8:32	14:27	20:49
			15.5	0.5	14.9	−1.1
	S	6	3:12	9:12	15:15	21:29
			15.0	1.3	14.3	−0.6
	S	7	3:58	9:51	15:54	22:12
			14.2	2.2	13.4	0.2
S	M	8	4:37	10:33	16:37	22:58
			13.3	3.1	12.4	1.1
☾	Tu	9	5:27	11:23	17:25	23:49
			12.4	4.0	11.5	2.0
A	W	10	6:21	12:23	18:24	. . .
			11.7	4.7	10.8	. . .
	Th	11	0:47	7:25	13:37	19:38
			2.8	11.2	4.9	10.5
	F	12	1:51	8:31	14:52	20:52
			3.1	11.2	4.7	10.9
	S	13	2:58	9:32	15:51	21:54
			3.0	11.7	3.9	11.5
	S	14	3:59	10:23	16:38	22:46
			2.6	12.3	2.9	12.3
	M	15	4:50	11:07	17:20	23:32
			2.0	13.0	1.9	13.3
E	Tu	16	5:37	11:50	17:59	. . .
			1.5	13.7	0.8	. . .
●	W	17	0:12	6:19	12:30	18:37
			14.1	0.9	14.3	−0.1
	Th	18	0:52	6:58	13:06	19:15
			14.9	0.6	14.6	−0.9
	F	19	1:33	7:37	13:42	19:53
			15.4	0.7	14.6	−1.3
	S	20	2:15	8:17	14:18	20:35
			15.5	1.0	14.4	−1.4
	S	21	2:59	8:58	14:57	21:19
			15.3	1.5	14.1	−1.0
N	M	22	3:46	9:42	15:40	22:07
			14.7	2.2	13.8	−0.4
P	Tu	23	4:36	10:31	16:29	23:00
			14.0	2.9	12.6	0.4
☽	W	24	5:32	11:30	17:30	23:59
			13.2	3.6	12.0	1.2
	Th	25	6:35	12:40	18:42	. . .
			12.5	3.9	11.6	. . .
	F	26	1:05	7:42	13:55	20:01
			1.9	12.2	3.8	11.8
	S	27	2:16	8:48	15:04	21:13
			2.1	12.4	3.0	12.3
E	S	28	3:24	9:47	16:00	22:13
			2.1	12.9	2.0	13.0
	M	29	4:25	10:38	16:48	23:06
			1.7	13.4	1.2	13.8
	Tu	30	5:19	11:28	17:37	23:57
			1.3	14.2	0.1	14.5

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	6:05	12:10	18:18	. . .
			1.1	14.6	−0.7	. . .
	Th	2	0:42	6:48	12:50	19:00
			14.9	1.1	14.7	−1.2
	F	3	1:26	7:28	13:28	19:40
			15.0	1.3	14.6	−1.3
	S	4	2:07	8:07	14:08	20:21
			14.9	1.7	14.2	−1.0
S	S	5	2:47	8:47	14:45	21:02
			14.5	2.2	13.6	−0.5
	M	6	3:30	9:27	15:25	21:45
			14.0	2.8	12.8	0.3
	Tu	7	4:13	10:11	16:08	22:30
			13.4	3.4	12.0	1.2
A	W	8	5:00	11:01	16:57	23:20
			12.7	3.9	11.3	2.0
☾	Th	9	5:52	12:00	17:56	. . .
			12.2	4.3	10.8	. . .
	F	10	0:15	6:42	13:04	19:05
			2.6	11.8	4.3	10.7
	S	11	1:16	7:47	14:05	20:13
			3.1	11.8	4.0	10.9
	S	12	2:20	8:42	14:59	21:12
			3.2	11.9	3.2	11.5
E	M	13	3:18	9:34	15:48	22:08
			3.0	12.4	2.3	12.4
	Tu	14	4:12	10:28	16:35	22:53
			2.5	13.0	1.3	13.3
	W	15	5:00	11:10	17:20	23:40
			2.1	13.6	0.2	14.1
	Th	16	5:47	11:50	18:02	. . .
			1.7	14.0	−0.7	. . .
●	F	17	0:26	6:29	12:30	18:45
			14.3	1.6	14.3	−1.4
	S	18	1:11	7:12	13:12	19:28
			15.2	1.5	14.3	−1.3
N	S	19	1:57	7:55	13:54	20:13
			15.4	1.7	14.2	−1.3
P	M	20	2:43	8:40	14:38	21:02
			15.3	2.0	13.8	−1.3
	Tu	21	3:32	9:29	15:27	21:52
			14.8	2.3	13.4	−0.7
	W	22	4:33	10:22	16:20	22:45
			14.3	2.7	12.8	0.1
☽	Th	23	5:17	11:22	17:23	23:43
			13.7	3.0	12.4	1.0
	F	24	6:15	12:27	18:34	. . .
			13.2	3.0	12.2	. . .
	S	25	0:48	7:14	13:30	19:42
			1.8	12.9	2.7	12.1
E	S	26	1:57	8:12	14:27	20:48
			2.3	12.8	2.2	12.5
	M	27	3:01	9:10	15:29	21:50
			2.4	13.0	1.5	12.9
	Tu	28	4:00	10:05	16:16	22:47
			2.4	13.4	0.7	13.3
	W	29	4:52	10:52	17:04	23:37
			2.4	13.8	0.0	13.7
	Th	30	5:40	11:37	17:49	. . .
			2.4	14.0	−0.6	. . .
○	F	31	0:22	6:22	12:20	18:32
			14.0	2.4	14.0	−0.9

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:04	7:05	13:02	19:15
			14.2	2.5	13.9	−0.9
S	S	2	1:45	7:45	13:42	19:57
			14.2	2.6	13.5	−0.7
	M	3	2:26	8:25	14:23	20:38
			14.1	2.8	13.1	−0.2
A	Tu	4	3:07	9:08	15:04	21:22
			13.9	3.1	12.6	0.3
	W	5	3:50	9:52	15:48	22:06
			13.6	3.3	12.0	1.0
	Th	6	4:35	10:40	16:36	22:53
			13.2	3.5	11.6	1.7
	F	7	5:22	11:32	17:29	23:43
			12.9	3.5	11.3	2.3
☾	S	8	6:10	12:25	18:29	. . .
			12.6	3.4	11.2	. . .
E	S	9	0:38	7:00	13:17	19:28
			2.8	12.3	3.0	11.4
	M	10	1:34	7:52	12:08	20:25
			3.1	12.4	2.4	11.8
	Tu	11	2:32	8:45	15:01	21:24
			3.2	12.5	1.7	12.4
	W	12	3:28	9:38	15:53	22:20
			3.1	12.9	0.8	13.1
	Th	13	4:22	10:26	16:42	23:12
			2.9	13.2	−0.1	13.8
	F	14	5:13	11:14	17:20	. . .
			2.7	13.6	−0.9	. . .
●	S	15	0:02	6:02	12:02	18:19
			14.4	2.4	14.0	−1.5
N	S	16	0:51	6:50	12:48	19:06
			14.9	2.4	14.2	−1.9
P	M	17	1:40	7:38	13:37	19:57
			15.2	2.0	14.2	−1.9
	Tu	18	2:28	8:27	14:26	20:47
			15.2	2.0	14.1	−1.5
	W	19	3:17	9:18	15:18	21:37
			15.1	2.0	13.9	−0.9
	Th	20	4:07	10:12	16:14	22:30
			14.7	2.0	13.5	−0.1
	F	21	4:57	11:07	17:15	23:28
			14.3	2.0	13.1	0.8
☽	S	22	5:48	12:02	18:14	. . .
E			13.8	1.9	12.7	. . .
	S	23	0:27	6:42	12:56	19:15
			1.7	13.3	1.8	12.5
	M	24	1:27	7:37	13:54	20:21
			2.4	13.1	1.5	12.4
	Tu	25	2:28	8:33	14:51	21:25
			3.0	13.0	1.2	12.3
	W	26	3:27	9:28	15:45	22:25
			3.3	13.0	0.8	12.5
	Th	27	4:25	10:19	16:35	23:17
			3.5	13.1	0.4	12.7
	F	28	5:16	11:08	17:24	. . .
			3.5	13.2	0.0	. . .
S	S	29	0:08	6:04	11:57	18:09
○			13.1	3.4	13.3	−0.2
	S	30	0:46	6:47	12:40	18:53
			13.4	3.2	13.3	−0.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 7.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
JULY.						
	M	1	1:29 13.6	7:30 3.2	13:23 13.2	19:35 −0.3
A	Tu	2	2:06 13.8	8:10 3.0	14:05 13.0	20:17 −0.1
	W	3	2:45 13.9	8:50 2.9	14:47 12.7	21:00 0.3
	Th	4	3:25 13.9	9:32 2.8	15:30 12.5	21.42 0.8
	F	5	4:07 13.7	10:15 2.6	16:14 12.2	22:07 1.4
	S	6	4:48 13.5	10:59 2.5	17:02 12.0	23:11 2.0
E	S	7	5:30 13.1	11:44 2.3	17:52 12.0	23:58 2.6
☾	M	8	6:15 12.8	12:32 2.1	18:44 11.9	. . . . .
	Tu	9	0:50 3.1	7:05 12.5	13:25 1.8	19:44 12.0
	W	10	1:47 3.5	7:58 12.4	14:20 1.3	20:47 12.2
	Th	11	2:46 3.7	8:58 12.5	15:17 0.7	21:49 12.6
	F	12	3:47 3.7	9:50 12.8	16:13 0.0	22:48 13.2
N	S	13	4:47 3.4	10:40 13.2	17:07 −0.7	23:42 13.9
●	S	14	5:43 3.0	11:40 13.8	18:00 −1.3	. . . . .
P	M	15	0:34 14.5	6:35 2.4	12:32 14.2	18:51 −1.7
	Tu	16	1:23 15.0	7:24 1.9	13:25 14.6	19:42 −1.8
	W	17	2:10 15.2	8:13 1.4	14:17 14.7	20:31 −1.6
	Th	18	2:58 15.3	9:02 1.0	15:08 14.7	21:20 −1.0
E	F	19	3:43 15.2	9:52 0.8	16:00 14.3	22:13 −0.2
	S	20	4:28 14.9	10:42 0.7	16:58 13.9	23:08 0.8
☽	S	21	5:15 14.2	11:30 0.9	17:46 13.3	23:57 1.7
	M	22	6:07 13.6	12:28 1.0	18:45 12.6	. . . . .
	Tu	23	0:50 2.7	6:58 13.1	13:20 1.2	19:50 12.1
	W	24	1:50 3.6	7:54 12.6	14:17 1.3	20:55 11.8
	Th	25	2:54 4.1	8:52 12.4	15:14 1.3	22:00 11.7
S	F	26	3:58 4.3	9:50 12.4	16:09 1.1	22:57 12.0
	S	27	4:57 4.2	10:45 12.5	17:00 0.8	23:45 12.4
	S	28	5:47 3.9	11:37 12.9	17:48 0.5	. . . . .
○ A	M	29	0:27 12.9	6:32 3.4	12:28 13.0	18:33 0.2
	Tu	30	1:07 13.4	7:12 3.0	13:06 13.2	19:16 0.0
	W	31	1:48 13.8	7:50 2.5	13:48 13.3	19:57 0.0

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
AUGUST.						
	Th	1	2:20 14.2	8:27 2.1	14:28 13.3	20:38 0.2
	F	2	2:57 14.3	9:05 1.8	15:08 13.3	21:18 0.6
E	S	3	3:34 14.2	9:43 1.5	15:48 13.2	21:57 1.1
	S	4	4:10 13.8	10:23 1.3	16:33 13.0	22:37 1.7
	M	5	4:51 14.4	11:04 1.2	17:15 12.8	23:22 2.3
☾	Tu	6	5:35 12.9	11:53 1.4	18:09 12.4	. . . . .
	W	7	0:10 3.2	6:22 12.4	12:46 1.4	19:10 12.1
	Th	8	1:05 3.8	7:17 12.1	13:45 1.3	20:16 12.0
	F	9	2:12 4.2	8:18 12.0	14:48 1.0	21:25 12.2
N	S	10	3:23 4.2	9:23 12.3	15:50 0.5	22:29 12.7
	S	11	4:30 3.7	10:28 13.0	16:48 −0.1	23:26 13.4
P	M	12	5:28 3.0	11:27 13.8	17:44 −0.8	. . . . .
●	Tu	13	0:17 14.2	6:20 2.0	12:22 14.6	18:36 −1.3
	W	14	1:04 14.9	7:08 1.1	13:14 15.1	19:25 −1.5
	Th	15	1:48 15.4	7:54 0.3	14:08 15.5	20:15 −1.4
E	F	16	2:30 15.6	8:40 −0.2	14:51 15.4	21:02 −1.0
	S	17	3:15 15.5	9:25 −0.4	15:38 15.1	21:48 −0.2
	S	18	4:00 15.0	10:12 −0.3	16:25 14.5	22:33 0.3
	M	19	4:43 14.4	10:57 0.1	17:17 13.6	23:21 2.1
☽	Tu	20	5:28 13.5	11:47 0.7	18:12 12.6	. . . . .
	W	21	0:13 3.2	6:20 12.7	12:42 1.3	19:14 11.8
S	Th	22	1:13 4.2	7:17 12.0	13:42 1.8	20:23 11.3
	F	23	2:24 4.7	8:22 11.7	14:44 2.0	21:32 11.2
	S	24	3:38 4.7	9:27 11.7	15:44 2.0	22:33 11.6
A	S	25	4:40 4.4	10:28 12.0	16:40 1.6	23:22 12.2
	M	26	5:30 3.8	11:22 12.5	17:27 1.1	. . . . .
	Tu	27	0:08 12.8	6:12 3.0	12:08 13.1	18:13 0.7
○	W	28	0:40 13.5	6:48 2.3	12:48 13.5	18:55 0.3
	Th	29	1:15 14.1	7:24 1.6	13:28 13.9	19:35 0.2
E	F	30	1:50 14.5	7:58 1.0	14:06 14.1	20:12 0.2
	S	31	2:25 14.6	8:33 0.5	14:44 14.2	20:49 0.5

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
SEPTEMBER.						
	S	1	3:01 14.4	9:10 0.4	15:22 14.2	21:27 0.9
	M	2	3:37 14.0	9:50 0.4	16:02 13.9	22:06 1.6
	Tu	3	4:18 13.5	10:32 0.6	16:48 13.4	22:47 2.5
☾	W	4	4:55 12.8	11:19 0.9	18:42 12.8	23:36 3.4
	Th	5	5:42 12.2	12:13 1.1	18:43 12.2	. . . . .
N	F	6	0:36 4.1	6:41 11.7	13:16 1.5	19:53 11.8
	S	7	1:50 4.5	7:53 11.6	14:24 1.5	21:06 11.9
	S	8	3:08 4.3	9:08 12.1	15:32 1.1	22:12 12.5
	M	9	4:18 3.5	10:17 13.0	16:36 0.5	23:08 13.3
P	Tu	10	5:13 2.4	11:16 14.0	17:29 −0.2	23:56 14.3
●	W	11	6:02 1.2	12:10 14.9	18:19 −0.7	. . . . .
E	Th	12	0:40 15.0	6:47 0.1	12:58 15.5	19:08 −1.0
	F	13	1:22 15.6	7:30 −0.7	13:42 15.9	19:54 −1.0
	S	14	2:05 15.7	8:13 −1.1	14:27 15.9	20:36 −0.5
	S	15	2:45 15.5	8:56 −1.1	15:13 15.4	21:18 0.3
	M	16	3:26 14.9	9:38 −0.8	15:58 14.6	22:00 1.4
	Tu	17	4:07 14.1	10:22 −0.2	16:47 13.7	22:45 2.5
☽	W	18	4:52 13.1	11:12 0.7	17:39 12.6	23:37 3.6
S	Th	19	5:42 12.2	12:06 1.6	18:38 11.8	. . . . .
	F	20	0:40 4.5	6:43 11.4	13:07 2.3	19:47 11.2
	S	21	1:56 4.9	7:55 11.0	14:12 2.7	21:00 11.1
A	S	22	3:14 4.7	9:07 11.2	15:17 2.6	22:00 11.5
	M	23	4:15 4.1	10:09 11.7	16:15 2.2	22:48 12.2
	Tu	24	5:02 3.3	11:01 12.4	17:07 1.7	23:30 13.0
	W	25	5:42 2.4	11:45 13.1	17:50 1.1	. . . . .
E ○	Th	26	0:07 13.7	6:17 1.4	12:25 13.8	18:30 0.7
	F	27	0:43 14.2	6:52 0.7	13:08 14.4	19:07 0.4
	S	28	1:20 14.5	7:26 0.0	13:39 14.8	19:45 0.4
	S	29	1:58 14.6	8:02 −0.4	14:15 15.0	20:21 0.6
	M	30	2:27 14.4	8:39 −0.6	14:55 14.9	20:57 1.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 7.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	3:01 14.0	9:18 −0.5	15:40 14.5	21:37 1.9
	W	2	3:39 13.4	10:02 −0.1	16:26 13.8	22:22 2.8
N	Th	3	4:23 12.7	10:50 0.5	17:20 13.1	23:13 3.6
☾	F	4	5:13 12.0	11:48 1.2	18:23 12.3	. . . . .
	S	5	0:18 4.3	6:20 11.4	12:54 1.8	19:33 11.8
	S	6	1:38 4.5	7:40 11.5	14:05 2.0	20:45 12.0
	M	7	2:57 3.9	9:00 12.0	15:15 1.7	21:48 12.6
P	Tu	8	4:01 2.9	10:06 13.0	16:17 1.2	22:42 13.4
E	W	9	4:58 1.6	11:02 14.0	17:12 0.6	23:29 14.3
●	Th	10	5:38 0.5	11:51 14.8	18:03 0.0	. . . . .
	F	11	0:15 14.9	6:22 −0.6	12:37 15.6	18:48 −0.1
	S	12	0:55 15.3	7:05 −1.4	13:22 15.9	19:30 0.0
	S	13	1:35 15.4	7:45 −1.6	14:05 15.7	20:10 0.5
	M	14	2:13 15.1	8:25 −1.5	14:48 15.2	20:50 1.2
	Tu	15	2:52 14.5	9:06 −1.0	15:32 14.5	21:31 2.1
S	W	16	3:33 13.6	9:54 −0.2	16:18 13.6	22:15 3.0
	Th	17	4:17 12.6	10:40 0.8	17:08 12.7	23:08 3.8
☽	F	18	5:08 11.7	11:32 1.8	18:06 11.9	. . . . .
A	S	19	0:10 4.5	6:10 11.0	12:31 2.6	19:10 11.4
	S	20	1:26 4.7	7:27 10.7	13:38 3.1	20:16 11.4
	M	21	2:38 4.5	8:40 10.9	14:45 3.1	21:15 11.8
	Tu	22	3:37 3.7	9:41 11.5	15:45 2.8	22:06 12.2
	W	23	4:21 2.8	10:32 12.3	16:36 2.3	22:50 12.9
E	Th	24	5:02 1.9	11:15 13.0	17:20 1.8	23:30 13.6
	F	25	5:41 0.8	11:54 14.0	18:00 1.3	. . . . .
○	S	26	0:10 14.1	6:18 −0.1	12:32 14.7	18:38 1.0
	S	27	0:44 14.4	6:55 −0.8	13:13 15.1	19:15 1.0
	M	28	1:19 14.5	7:32 −1.2	13:53 15.3	19:53 1.2
	Tu	29	1:55 14.3	8:12 −1.4	14:37 15.2	20:33 1.6
N	W	30	2:32 13.9	8:55 −1.1	15:21 14.8	21:16 2.2
	Th	31	3:13 13.3	9:40 −0.5	16:10 14.1	22:04 2.8
NOVEMBER.						
	F	1	4:00 12.6	10:32 0.2	17:08 13.4	23:00 3.5
☾	S	2	4:58 12.0	11:30 1.1	18:05 12.7	. . . . .
P	S	3	0:08 3.8	6:09 11.6	12:35 1.8	19:11 12.3
	M	4	1:22 3.8	7:28 11.7	13:45 2.2	20:18 12.4
	Tu	5	2:33 3.1	8:43 12.2	14:55 2.2	21:17 12.8
E	W	6	3:30 2.1	9:45 12.8	15:58 1.9	22:11 13.4
	Th	7	4:22 1.1	10:43 13.8	16:53 1.4	23:02 14.1
	F	8	5:10 0.0	11:34 14.5	17:42 1.2	23:45 14.6
●	S	9	5:53 −0.9	12:20 15.0	18:25 1.1	. . . . .
	S	10	0:26 14.9	6:36 −1.5	13:03 15.2	19:05 1.3
	M	11	1:06 14.9	7:18 −1.7	13:46 15.1	19:46 1.6
S	Tu	12	1:46 14.5	8:00 −1.5	14:27 14.8	20:26 2.0
	W	13	2:26 14.0	8:42 −0.9	15:10 14.3	21:08 2.6
	Th	14	3:08 13.2	9:26 −0.2	15:54 13.7	21:53 3.1
	F	15	3:51 12.4	10:12 0.7	16:42 13.0	22:45 3.7
A	S	16	4:42 11.6	11:02 1.7	17:33 12.4	23:43 4.1
☽	S	17	5:42 11.0	11:58 2.5	18:30 12.0	. . . . .
	M	18	0:46 4.2	6:50 10.7	12:59 3.1	19:27 11.9
	Tu	19	1:46 3.9	7:58 10.8	14:02 3.3	20:23 11.9
E	W	20	2:40 3.3	8:55 11.3	15:02 3.3	21:15 12.3
	Th	21	3:30 2.4	9:48 12.0	15:55 2.9	22:05 12.8
	F	22	4:16 1.5	10:38 12.9	16:43 2.5	22:50 13.4
	S	23	5:02 0.5	11:23 13.7	17:27 2.2	23:31 13.8
	S	24	5:42 −0.5	12:08 14.5	18:08 1.9	. . . . .
○	M	25	0:10 14.1	6:24 −1.3	12:51 15.0	18:50 1.8
	Tu	26	0:50 14.2	7:07 −1.7	13:35 15.3	19:32 1.8
N	W	27	1:30 14.2	7:50 −1.8	14:20 15.2	20:16 2.0
P	Th	28	2:14 13.9	8:37 −1.5	15:07 15.0	21:02 2.2
	F	29	3:00 13.5	9:25 −0.9	15:57 14.5	21:53 2.5
	S	30	3:52 13.0	10:17 −0.1	16:48 13.9	22:50 2.8
DECEMBER.						
☾	S	1	4:50 12.5	11:13 0.8	17:43 13.4	23:53 2.9
	M	2	5:58 12.2	12:15 1.7	18:42 13.0	. . . . .
E	Tu	3	0:57 2.7	7:08 12.1	13:22 2.3	19:41 12.7
	W	4	1:55 2.3	8:16 12.3	14:29 2.6	20:40 12.9
	Th	5	2:56 1.6	9:24 12.7	15:33 2.7	21:38 13.3
	F	6	3:51 0.8	10:23 13.1	16:28 2.6	22:28 13.7
	S	7	4:42 0.0	11:17 13.6	17:18 2.5	23:15 14.0
	S	8	5:28 −0.6	12:08 14.0	18:04 2.4	. . . . .
●	M	9	0:00 14.1	6:13 −1.0	12:47 14.2	18:47 2.4
S	Tu	10	0:43 14.1	6:57 −1.2	13:28 14.3	19:28 2.5
	W	11	1:26 13.9	7:40 −1.0	14:09 14.3	20:10 2.6
	Th	12	2:07 13.5	8:22 −0.7	14:50 14.1	20:52 2.8
	F	13	2:50 13.0	9:04 −0.1	15:33 13.9	21:36 3.0
A	S	14	3:33 12.4	9:48 0.7	16:15 13.5	22:23 3.2
	S	15	4:20 11.9	10:35 1.5	17:00 13.1	23:12 3.3
	M	16	5:10 11.4	11:24 2.3	17:48 12.7	. . . . .
☽ E	Tu	17	0:02 3.3	6:07 11.2	12:15 2.9	18:37 12.3
	W	18	0:54 3.0	7:05 11.2	13:10 3.4	19:28 12.2
	Th	19	1:47 2.7	8:03 11.4	14:08 3.6	20:21 12.2
	F	20	2:41 2.0	9:04 11.8	15:07 3.6	21:15 12.5
	S	21	3:32 1.3	10:01 12.9	16:03 3.4	22:07 12.8
	S	22	4:23 0.4	10:55 13.2	16:55 3.2	22:55 13.2
	M	23	5:12 −0.5	11:44 13.8	17:45 2.8	23:42 13.7
N ○	Tu	24	6:00 −1.2	12:32 14.5	18:32 2.5	. . . . .
	W	25	0:28 14.0	6:47 −1.7	13:19 15.0	19:18 2.2
P	Th	26	1:15 14.2	7:35 −1.9	14:05 15.2	20:05 1.9
	F	27	2:03 14.3	8:23 −1.8	14:52 15.2	20:52 1.7
	S	28	2:53 14.1	9:12 −1.2	15:40 15.0	21:42 1.7
	S	29	3:45 13.8	10:02 −0.5	16:27 14.6	22:35 1.6
E	M	30	4:42 13.4	10:57 0.5	17:17 14.1	23:30 1.6
☾	Tu	31	5:41 13.0	11:54 1.5	18:07 13.5	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 7.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

HONOLULU (Oahu Island), HAWAIIAN ISLANDS, 1912.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	0:32 0.1	4:44 0.5	9:58 0.0	17:29 2.0
	Tu	2	1:07 0.1	5:30 0.5	10:30 0.0	18:05 1.9
	W	3	1:40 0.1	6:25 0.5	11:12 0.2	18:37 1.7
	Th	4	2:12 0.1	7:25 0.6	12:00 0.3	19:06 1.6
	F	5	2:43 0.1	8:38 0.7	13:02 0.5	19:40 1.4
E	S	6	3:12 0.0	9:50 0.9	14:32 0.7	20:17 1.2
☾	S	7	3:40 0.0	10:53 1.2	16:32 0.7	21:00 1.0
	M	8	4:15 −0.1	11:48 1.4	18:25 0.7	22:04 0.8
	Tu	9	4:50 −0.1	12:36 1.7	19:56 0.5	23:18 0.6
	W	10	5:32 −0.2	13:24 2.0	21:00 0.3	. . . . .
	Th	11	0:24 0.5	6:18 −0.3	14:10 2.2	21:47 0.2
N	F	12	1:30 0.6	7:05 −0.3	14:58 2.3	22:33 0.1
	S	13	2:30 0.4	7:56 −0.3	15:40 2.4	23:15 0.0
● P	S	14	3:25 0.4	8:46 −0.3	16:23 2.4	23:55 0.0
	M	15	4:22 0.5	9:35 −0.3	17:05 2.3	. . . . .
	Tu	16	0:34 0.0	5:18 0.6	10:27 −0.1	17:47 2.1
	W	17	1:10 0.0	6:22 0.7	11:24 0.1	18:27 1.9
E	Th	18	1:44 −0.1	7:27 0.8	12:23 0.3	19:06 1.6
	F	19	2:18 −0.1	8:43 1.0	13:43 0.5	19:43 1.3
☽	S	20	2:53 −0.1	9:58 1.2	15:34 0.7	20:17 1.0
	S	21	3:30 −0.1	11:04 1.4	17:37 0.7	21:03 0.8
	M	22	4:08 −0.1	12:00 1.6	19:35 0.6	22:13 0.7
	Tu	23	4:52 −0.1	12:48 1.8	20:39 0.4	23:33 0.5
	W	24	5:35 −0.1	13:30 1.9	21:14 0.3	. . . . .
S	Th	25	0:48 0.5	6:23 −0.1	14:12 2.0	21:45 0.2
	F	26	1:43 0.5	7:06 −0.1	14:46 2.0	22:16 0.2
	S	[illegible]	[illegible]	7:52 [illegible]	15:28 2.0	22:45 0.1
	[illegible]	[illegible]	[illegible]	[illegible]	15:56 2.0	23:14 [illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	16:30 2.0	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	17[illegible]	[illegible]

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:32 0.1	5:55 0.8	11:12 0.2	17:53 1.6
E	F	2	0:55 0.1	6:47 0.9	11:57 0.4	18:24 1.4
	S	3	1:20 0.0	7:43 1.0	13:00 0.5	18:50 1.2
	S	4	1:47 0.0	8:48 1.2	14:28 0.7	19:20 1.0
☾	M	5	2:23 0.0	10:00 1.4	16:40 0.7	20:00 0.8
	Tu	6	3:05 0.0	11:05 1.6	18:50 0.6	21:10 0.7
	W	7	3:55 −0.1	12:05 1.8	20:05 0.4	22:02 0.4
	Th	8	4:55 −0.1	13:00 2.0	20:48 0.2	. . . . .
N	F	9	0:30 0.4	5:55 −0.2	13:15 2.2	21:26 0.1
	S	10	1:35 0.5	6:56 −0.3	14:46 2.3	22:00 0.0
P	S	11	2:32 0.5	7:57 −0.3	15:20 2.3	22:35 0.0
●	M	12	3:26 0.7	8:47 −0.3	16:00 2.3	23:07 −0.1
	Tu	13	4:12 0.8	9:40 −0.2	16:40 2.1	23:40 −0.1
	W	14	5:04 0.9	10:35 0.0	17:17 1.9	. . . . .
E	Th	15	0:09 −0.1	5:58 1.1	11:30 0.2	17:50 1.6
	F	16	0:38 −0.1	6:55 1.2	12:35 0.4	18:23 1.3
	S	17	1:05 −0.1	7:55 1.3	13:55 0.6	18:54 1.0
	S	18	1:37 0.0	9:08 1.4	15:54 0.6	19:19 0.8
☽	M	19	2:14 0.0	10:13 1.5	18:25 0.6	19:50 0.7
	Tu	20	2:55 0.1	11:20 1.6	19:54 0.4	22:15 0.5
	W	21	4:00 0.1	12:16 1.7	20:23 0.3	. . . . .
S	Th	22	0:08 0.4	5:05 0.1	13:04 1.8	20:46 0.3
	F	23	1:00 0.5	6:06 0.1	13:46 1.8	21:10 0.2
A	S	24	1:44 0.6	7:08 0.0	14:24 1.9	[illegible]
	S	25	2:22 0.7	7:46 0.0	14:56 1.9	[illegible]
	M	26	3:00 0.8	8:28 0.0	15:28 1.9	[illegible]
○	Tu	27	3:34 0.9	9:08 0.0	15:54 [illegible]	[illegible]
	W	28	4:10 1.0	9:46 0.1	[illegible]	[illegible]
	Th	29	4:46 1.1	10:25 0.2	[illegible]	[illegible]
	[illegible]	30	5:20 1.2	[illegible]	[illegible]	[illegible]
		31	6:[illegible]	[illegible]	[illegible]	[illegible]

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	0:10 0.0	7:00 1.4	13:[illegible]	[illegible]
	M	2	0:34 0.0	7:57 1.5	14:[illegible]	[illegible]
	Tu	3	1:10 0.0	9:10 1.6	17:[illegible]	[illegible]
☾	W	4	1:56 0.0	10:25 1.7	[illegible]	[illegible]
N	Th	5	3:06 0.0	11:35 1.8	[illegible]	[illegible]
	F	6	4:34 0.0	12:33 1.8	[illegible]	[illegible]
	S	7	0:[illegible] 0.5	5:14 [illegible]	[illegible]	[illegible]
	S	8	1:[illegible] [illegible]	6:55 [illegible]	14:[illegible]	[illegible]
P	M	9	2:20 0.[illegible]	[illegible]	14:58 [illegible]	[illegible]
●	Tu	10	3:14 1.0	[illegible]	15:[illegible]	[illegible]
E	W	11	4:00 1.2	9:47 0.0	[illegible]	[illegible]
	Th	12	4:44 1.4	10:43 0.1	16:[illegible]	[illegible]
	F	13	5:30 1.5	11:[illegible] 0.[illegible]	[illegible]	[illegible]
	S	14	6:20 1.6	[illegible]	[illegible]	[illegible]
	S	15	7:12 1.6	[illegible]	[illegible]	[illegible]
	M	16	0:22 0.0	[illegible]	[illegible]	[illegible]
☽	Tu	17	0:[illegible] [illegible]	[illegible]	[illegible]	[illegible]
S	W	18	[illegible]	[illegible]	[illegible]	[illegible]
	Th	19	[illegible]	[illegible]	[illegible]	[illegible]
	F	20	[illegible]	[illegible]	[illegible]	[illegible]
	S	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	S	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	M	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Tu	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	W	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Th	28	2:10 2.6	8:18 0.5	14:30 3.0	[illegible]
	F	29	3:10 2.9	9:15 0.2	15:27 3.2	[illegible]
	S	30	4:00 3.1	10:07 0.0	16:17 3.4	[illegible]
E	S	31	4:44 3.3	10:55 −0.2	17:05 3.5	[illegible]

5:27 3.5 | 11:38 −0.3 | 17:50 3.5 | . .

[illegible] first line and heights on the second line of each day [illegible] water. The heights, in feet and tenths, are reckoned [illegible] soundings on the German Charts for this region, and [illegible] add the tabular height to the soundings given on the [illegible] subtract it.

[illegible] W.; 0h is midnight, 12h is noon; all hours less than 12 are in [illegible] when diminished by 12 give the times after noon; for instance,

E., moon on the equator; N, S, moon farthest north or south of the

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	3:00	9:35	14:47	21:22
			−0.2	4.3	1.2	5.7
○	Tu	2	3:32	10:00	15:30	22:07
			0.1	4.7	0.8	5.3
	W	3	4:00	10:24	16:17	22:52
			0.4	5.0	0.5	4.7
	Th	4	4:25	10:50	17:00	23:37
			0.8	5.2	0.4	4.1
	F	5	4:51	11:15	17:53	. . .
			1.2	5.3	0.3	. . .
	S	6	0:25	5:13	11:42	18:45
			3.4	1.6	5.2	0.4
	S	7	1:19	5:25	12:10	19:49
			2.8	2.0	5.1	0.6
S	M	8	2:34	5:21	12:35	21:10
			2.3	2.2	5.0	0.7
☾	Tu	9	13:11	22:41	. . .	. . .
			4.8	0.8	. . .	. . .
A	W	10	14:00	23:50	. . .	. . .
			4.6	0.7	. . .	. . .
	Th	11	15:17	. . .	. . .	. . .
			4.5	. . .	. . .	. . .
	F	12	0:41	8:48	11:18	17:04
			0.6	3.1	2.9	4.4
	S	13	1:16	8:39	12:29	18:27
			0.5	3.3	2.5	4.6
	S	14	1:43	8:45	13:19	19:26
			0.4	2.6	2.0	4.8
	M	15	2:11	8:58	14:00	20:15
			0.4	4.0	1.4	4.8
E	Tu	16	2:35	9:12	14:45	21:00
			0.4	4.4	1.7	4.7
●	W	17	3:00	9:31	15:30	21:50
			0.5	4.8	0.2	4.5
	Th	18	3:30	9:58	16:15	22:40
			0.8	5.2	−0.3	4.1
	F	19	3:55	10:17	17:00	23:35
			1.1	5.4	−0.6	3.7
	S	20	4:20	10:45	17:53	. . .
			1.5	5.6	−0.7	. . .
	S	21	0:34	4:41	11:19	18:52
			3.2	1.9	5.7	−0.7
N	M	22	1:42	4:55	11:55	20:00
			2.8	2.3	5.7	−0.6
P	Tu	23	3:24	4:50	12:42	21:16
			2.5	2.5	5.6	−0.5
☽	W	24	13:35	22:32	. . .	. . .
			5.4	−0.4	. . .	. . .
	Th	25	14:54	23:31	. . .	. . .
			5.1	−0.3	. . .	. . .
	F	26	8:09	10:40	16:42	. . .
			3.3	3.1	4.9	. . .
	S	27	0:30	8:00	12:09	18:15
			−0.2	3.6	2.7	4.8
E	S	28	1:11	8:13	13:11	19:30
			0.0	4.0	2.0	4.8
	M	29	1:47	8:31	14:00	20:26
			0.2	4.4	1.3	4.6
	Tu	30	2:17	8:54	14:52	21:18
			0.5	4.9	0.7	4.4

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	2:47	9:17	15:35	22:10
			0.8	5.3	0.3	4.0
	Th	2	3:12	9:42	16:16	23:00
			1.1	5.6	0.0	3.7
	F	3	3:37	10:10	17:00	23:50
			1.4	5.7	−0.1	3.3
	S	4	4:00	10:36	17:44	. . .
			1.8	5.8	−0.1	. . .
S	S	5	0:45	4:22	11:00	18:33
			2.9	2.1	5.7	0.0
	M	6	1:45	4:29	11:35	19:29
			2.6	2.3	5.5	0.2
	Tu	7	3:17	4:05	12:04	20:32
			2.5	2.5	5.3	0.4
A	W	8	12:43	21:37	. . .	. . .
			5.1	0.5	. . .	. . .
☾	Th	9	13:30	22:34	. . .	. . .
			4.8	0.6	. . .	. . .
	F	10	14:30	23:22	. . .	. . .
			4.5	0.6	. . .	. . .
	S	11	7:56	10:42	15:50	. . .
			3.1	2.9	4.2	. . .
	S	12	0:00	7:43	12:00	17:22
			0.6	3.4	2.4	4.0
E	M	13	0:35	7:45	12:58	18:43
			0.7	3.8	1.7	3.9
	Tu	14	1:09	8:00	13:50	19:54
			0.7	4.3	0.9	3.8
	W	15	1:40	8:16	14:36	20:53
			0.9	4.9	0.1	3.7
	Th	16	2:10	8:40	15:22	21:53
			1.1	5.4	−0.5	3.5
●	F	17	2:44	9:05	16:09	22:51
			1.4	5.9	−1.0	3.4
	S	18	3:13	9:37	17:00	23:51
			1.7	6.2	−1.3	3.2
N	S	19	3:44	10:15	17:52	. . .
			2.1	6.4	−1.3	. . .
P	M	20	0:52	4:11	10:58	18:58
			3.0	2.3	6.4	−1.2
	Tu	21	2:00	4:36	11:45	19:57
			2.9	2.6	6.3	−1.0
	W	22	3:15	5:00	12:36	21:00
			2.8	2.7	6.0	−0.7
☽	Th	23	13:36	22:00	. . .	. . .
			5.6	−0.4	. . .	. . .
	F	24	6:08	8:34	14:46	22:54
			3.2	3.1	5.0	−0.1
	S	25	6:25	10:42	16:15	23:40
			3.5	2.9	4.4	0.2
E	S	26	6:51	12:05	17:55	. . .
			3.9	2.3	3.9	. . .
	M	27	0:20	7:16	13:12	19:18
			0.6	4.3	1.6	3.6
	Tu	28	0:55	7:45	14:05	20:30
			0.9	4.9	0.9	3.4
	W	29	1:28	8:13	14:58	21:28
			1.1	5.3	0.3	3.3
	Th	30	2:00	8:41	15:34	22:20
			1.4	5.7	−0.1	3.1
○	F	31	2:28	9:05	16:15	23:10
			1.6	5.9	−0.3	3.0

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:00	9:39	16:55	. . .
			1.9	6.1	−0.4	. . .
S	S	2	0:01	3:24	10:08	17:38
			2.9	2.2	6.1	−0.3
	M	3	0:58	3:46	10:39	18:22
			2.8	2.4	6.0	−0.2
A	Tu	4	1:46	4:04	11:15	19:10
			2.7	2.5	5.9	0.0
	W	5	2:58	4:14	11:46	19:57
			2.7	2.6	5.6	0.1
	Th	6	12:24	20:44	. . .	. . .
			5.4	0.3	. . .	. . .
	F	7	13:04	21:26	. . .	. . .
			5.0	0.4	. . .	. . .
☾	S	8	13:52	22:10	. . .	. . .
			4.5	0.6	. . .	. . .
E	S	9	6:00	10:09	14:58	22:45
			3.2	2.7	3.9	0.8
	M	10	6:06	11:35	16:15	23:25
			3.5	2.1	3.3	1.0
	Tu	11	6:27	12:41	18:09	. . .
			4.1	1.3	2.9	. . .
	W	12	0:05	6:52	13:37	19:50
			1.2	4.6	0.4	2.8
	Th	13	0:45	7:23	14:28	21:05
			1.4	5.3	−0.4	2.9
	F	14	1:25	7:58	15:15	22:08
			1.7	5.9	−1.0	3.0
●	S	15	2:04	8:34	16:04	23:04
			1.9	6.4	−1.4	3.1
N	S	16	2:42	9:17	16:53	23:55
			2.1	6.7	−1.6	3.1
P	M	17	3:17	10:05	17:45	. . .
			2.3	6.9	−1.6	. . .
	Tu	18	0:45	3:57	10:53	18:41
			3.0	2.4	6.9	−1.3
	W	19	1:36	4:42	11:46	19:35
			3.0	2.5	6.7	−1.0
	Th	20	2:25	5:34	12:36	20:28
			3.1	2.6	6.2	−0.6
	F	21	3:16	6:55	13:30	21:17
			3.2	2.8	5.5	−0.2
☽ E	S	22	4:05	8:44	14:30	22:00
			3.4	2.7	4.6	0.3
	S	23	4:53	10:30	15:46	22:42
			3.8	2.4	3.7	0.7
	M	24	5:39	12:00	17:36	23:24
			4.2	1.8	3.0	1.1
	Tu	25	6:23	13:13	19:27	. . .
			4.6	1.1	2.7	. . .
	W	26	0:08	7:00	14:08	20:48
			1.4	5.1	0.5	2.7
	Th	27	0:42	7:40	14:55	21:45
			1.7	5.5	0.0	2.7
	F	28	1:20	8:14	15:34	22:34
			1.9	5.8	−0.3	2.8
S ○	S	29	1:57	8:47	16:10	23:15
			2.0	6.0	−0.4	2.9
	S	30	2:33	9:23	16:45	23:55
			2.1	6.2	−0.4	2.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3rd quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:05	9:55	17:22	. . .
			2.3	6.2	—0.4	. . .
A	Tu	2	0:35	3:40	10:28	18:00
			2.9	2.4	6.2	—0.2
	W	3	1:12	4:07	11:00	18:36
			2.9	2.5	6.1	—0.1
	Th	4	1:51	4:40	11:35	19:13
			2.9	2.5	5.8	0.1
	F	5	2:28	5:25	12:07	19:46
			2.9	2.5	5.4	0.3
	S	6	2:54	6:19	12:41	20:20
			3.0	2.6	4.8	0.4
E	S	7	3:16	7:50	13:30	20:49
			3.2	2.5	4.1	0.7
☾	M	8	3:47	9:45	14:17	21:25
			3.4	2.2	3.4	1.0
	Tu	9	4:17	11:12	15:36	22:07
			3.8	1.6	2.6	1.4
	W	10	5:00	12:25	18:14	22:55
			4.3	0.8	2.2	1.7
	Th	11	5:47	13:25	20:30	23:58
			4.8	0.0	2.3	2.0
	F	12	6:37	14:18	21:33	. . .
			5.5	—0.7	2.7	. . .
N	S	13	0:52	7:32	15:08	22:18
			2.2	6.1	—1.2	2.9
●	S	14	1:38	8:20	15:55	22:56
			2.2	6.7	—1.5	3.0
P	M	15	2:25	9:11	16:43	23:36
			2.2	7.1	—1.6	3.2
	Tu	16	3:10	10:00	17:28	. . .
			2.2	7.2	—1.4	. . .
	W	17	0:18	3:56	10:52	18:15
			3.2	2.1	7.1	—1.1
	Th	18	0:52	4:50	11:42	19:01
			3.3	2.1	6.6	—0.6
E	F	19	1:29	5:50	12:30	19:45
			3.4	2.1	5.9	—0.1
	S	20	2:06	7:00	13:20	20:23
			3.7	2.2	5.0	0.4
☽	S	21	2:49	8:33	14:15	21:00
			3.9	2.1	3.9	0.9
	M	22	3:33	10:15	15:30	21:38
			4.1	1.8	3.0	1.3
	Tu	23	4:22	11:46	17:56	22:18
			4.4	1.4	2.3	1.7
	W	24	5:21	13:10	20:10	23:10
			4.7	0.8	2.3	2.0
	Th	25	6:23	14:08	21:15	. . .
			5.0	0.3	2.5	. . .
S	F	26	0:08	7:10	14:58	21:54
			2.1	5.3	0.0	2.7
	S	27	0:55	7:55	15:23	22:25
			2.2	5.6	—0.2	2.9
	S	28	1:44	8:35	15:54	22:55
			2.2	6.0	—0.3	3.1
○ A	M	29	2:22	9:11	16:25	23:22
			2.2	6.2	—0.3	3.1
	Tu	30	2:57	9:44	16:54	23:53
			2.1	6.3	—0.3	3.2
	W	31	3:35	10:17	17:24	. . .
			2.1	6.2	—0.1	. . .

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:19	4:11	10:47	17:58
			3.2	2.1	6.0	0.0
	F	2	0:45	4:58	11:20	18:22
			3.3	2.0	5.6	0.2
E	S	3	1:08	5:36	11:54	18:45
			3.4	2.0	5.0	0.5
	S	4	1:29	6:34	12:30	19:10
			3.5	1.9	4.3	0.7
	M	5	1:52	7:53	13:09	19:29
			3.7	1.7	3.5	1.1
☾	Tu	6	2:15	9:19	14:07	19:49
			3.9	1.4	2.8	1.4
	W	7	2:49	10:51	15:42	19:49
			4.2	1.0	2.1	1.8
	Th	8	3:40	12:10	. . .	. . .
			4.5	0.4	. . .	. . .
	F	9	4:53	13:15	21:38	23:24
			4.9	—0.3	2.6	2.5
N	S	10	6:13	14:10	21:43	. . .
			5.5	—0.8	2.8	. . .
	S	11	0:30	7:19	14:55	22:04
			2.6	6.1	—1.2	3.1
P	M	12	1:34	8:16	15:40	22:30
			2.3	6.7	—1.3	3.3
●	Tu	13	2:25	9:08	16:19	22:58
			2.0	7.0	—1.2	3.5
	W	14	3:11	10:55	16:56	23:28
			1.8	7.0	—0.9	3.7
	Th	15	4:00	10:45	17:34	. . .
			1.6	6.7	—0.5	. . .
E	F	16	0:00	4:49	11:32	18:12
			3.9	1.4	6.1	0.0
	S	17	0:32	5:46	12:19	18:45
			4.1	1.4	5.2	0.5
	S	18	1:04	6:52	13:09	19:15
			4.3	1.4	4.1	1.1
	M	19	1:42	8:15	14:08	19:50
			4.4	1.4	3.2	1.5
☽	Tu	20	2:18	9:54	15:45	20:10
			4.5	1.3	2.4	1.9
	W	21	3:05	11:29	. . .	. . .
			4.5	1.0	. . .	. . .
S	Th	22	4:14	12:55	21:08	22:30
			4.5	0.6	2.5	2.4
	F	23	5:43	13:52	21:24	23:44
			4.7	0.3	2.8	2.6
	S	24	6:45	14:30	21:43	. . .
			5.0	0.1	3.0	. . .
A	S	25	0:44	7:42	14:56	21:58
			2.4	5.4	—0.1	3.2
	M	26	1:31	8:19	15:24	22:17
			2.2	5.7	—0.1	3.3
	Tu	27	2:05	8:58	15:50	22:38
			2.0	6.0	—0.1	3.5
○	W	28	2:56	9:25	16:13	23:00
			1.8	6.0	0.0	3.7
	Th	29	3:30	10:00	16:33	23:19
			1.6	5.9	0.1	3.8
E	F	30	4:11	10:33	17:03	23:42
			1.4	5.5	0.3	3.9
	S	31	4:52	11:06	17:25	. . .
			1.2	5.0	0.6	. . .

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	0:00	5:39	11:45	17:47
			4.1	1.1	4.3	0.9
	M	2	0:18	6:32	12:30	18:05
			4.2	0.9	3.6	1.2
	Tu	3	0:40	7:39	13:20	18:16
			4.4	0.8	2.9	1.6
☾	W	4	1:07	9:07	14:39	18:10
			4.5	0.7	2.2	1.9
	Th	5	1:47	10:37	. . .	. . .
			4.6	0.4	. . .	. . .
N	F	6	2:45	11:55	. . .	. . .
			4.8	0.0	. . .	. . .
	S	7	4:18	13:00	21:26	23:25
			5.0	—0.5	3.0	2.9
	S	8	6:00	13:50	21:19	. . .
			5.4	—0.8	3.2	. . .
	M	9	0:45	7:14	14:30	21:32
			2.6	6.0	—0.9	3.4
P	Tu	10	1:35	8:15	15:10	21:51
			2.1	6.4	—0.9	3.7
●	W	11	2:26	9:00	15:46	22:15
			1.6	6.5	—0.6	4.1
E	Th	12	3:05	9:50	16:18	22:38
			1.2	6.3	—0.2	4.4
	F	13	4:00	10:36	16:48	23:05
			0.9	5.8	0.2	4.7
	S	14	4:48	11:28	17:18	23:30
			0.7	5.0	0.7	4.9
	S	15	5:43	12:15	17:40	. . .
			0.6	4.2	1.2	. . .
	M	16	0:05	6:42	13:08	18:05
			5.0	0.7	3.3	1.7
	Tu	17	0:40	7:58	14:17	18:12
			4.9	0.8	2.6	2.0
☽	W	18	1:15	9:24	. . .	. . .
			4.8	0.8	. . .	. . .
S	Th	19	1:56	11:00	. . .	. . .
			4.6	0.7	. . .	. . .
	F	20	2:56	12:18	. . .	. . .
			4.5	0.5	. . .	. . .
	S	21	4:35	13:12	21:02	23:35
			4.5	0.4	3.1	2.9
A	S	22	6:13	13:45	21:07	. . .
			4.7	0.2	3.3	. . .
	M	23	0:35	7:10	14:12	21:18
			2.6	5.0	0.2	3.5
	Tu	24	1:20	7:58	14:37	21:30
			2.1	5.2	0.1	3.7
	W	25	2:00	8:30	15:00	21:45
			1.7	5.4	0.2	4.0
E ○	Th	26	2:45	9:05	15:25	22:03
			1.3	5.3	0.3	4.3
	F	27	3:20	9:45	15:45	22:20
			0.9	5.1	0.5	4.6
	S	28	4:05	10:23	16:12	22:39
			0.5	4.7	0.7	4.8
	S	29	4:48	11:02	16:35	23:00
			0.3	4.1	1.0	5.0
	M	30	5:35	11:54	16:54	23:20
			0.1	3.6	1.4	5.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	6:30	12:49	17:09	23:48
			0.0	3.0	1.8	5.1
	W	2	7:38	14:04	17:12	. . .
			0.0	2.5	2.1	. . .
N	Th	3	0:23	8:58	. . .	. . .
			5.1	0.0	. . .	. . .
☾	F	4	1:09	10:21	. . .	. . .
			5.1	—0.1	. . .	. . .
	S	5	2:17	11:35	. . .	. . .
			5.0	—0.3	. . .	. . .
	S	6	3:59	12:34	20:40	23:40
			5.0	—0.5	3.3	3.0
	M	7	5:49	13:21	20:37	. . .
			5.2	—0.5	3.6	. . .
P	Tu	8	0:47	7:05	14:00	20:48
			2.4	5.5	—0.4	4.0
E	W	9	1:38	8:04	14:34	21:06
			1.8	5.6	—0.2	4.4
●	Th	10	2:28	8:57	15:04	21:29
			1.1	5.5	0.1	4.8
	F	11	3:14	9:46	15:32	21:52
			0.6	5.1	0.5	5.2
	S	12	4:00	10:33	15:59	22:20
			0.2	4.6	0.9	5.5
	S	13	4:46	11:24	16:24	22:48
			0.0	4.0	1.4	5.6
	M	14	5:34	12:19	16:44	23:17
			0.0	3.4	1.8	5.6
	Tu	15	6:28	13:22	16:58	23:48
			0.1	2.8	2.1	5.4
S	W	16	7:32	14:51	16:46	. . .
			0.3	2.5	2.4	. . .
	Th	17	0:21	8:51	. . .	. . .
			5.2	0.5	. . .	. . .
☽	F	18	1:01	10:12	. . .	. . .
			4.9	0.6	. . .	. . .
A	S	19	1:55	11:20	. . .	. . .
			4.6	0.5	. . .	. . .
	S	20	3:12	12:10	20:32	23:10
			4.4	0.5	3.3	3.1
	M	21	4:56	12:47	20:25	. . .
			4.3	0.5	3.5	. . .
	Tu	22	0:18	6:18	13:16	20:30
			2.6	4.4	0.5	3.8
	W	23	1:07	7:14	13:43	20:40
			2.0	4.4	0.5	4.1
E	Th	24	1:52	8:02	14:09	20:52
			1.4	4.4	0.5	4.6
	F	25	2:35	8:47	14:35	21:09
			0.7	4.3	0.7	5.0
○	S	26	3:17	9:33	15:00	21:28
			0.2	4.1	0.9	5.3
	S	27	3:59	10:21	15:25	21:50
			—0.3	3.8	1.2	5.6
	M	28	4:43	11:15	15:49	22:14
			—0.6	3.4	1.6	5.8
	Tu	29	5:32	12:14	16:10	22:45
			—0.8	3.0	1.9	5.9
N	W	30	6:28	13:22	16:26	23:21
			—0.8	2.7	2.3	5.9
	Th	31	7:34	14:56	16:23	. . .
			—0.7	2.6	2.5	. . .

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	0:02	8:48	. . .	. . .
			5.7	—0.6	. . .	. . .
☾	S	2	0:58	10:00	. . .	. . .
			5.5	—0.5	. . .	. . .
P	S	3	2:07	11:03	20:06	22:08
			5.1	—0.4	3.4	3.3
	M	4	3:43	11:59	19:38	23:41
			4.8	—0.2	3.6	2.8
	Tu	5	5:30	12:41	19:47	. . .
			4.6	0.0	4.0	. . .
E	W	6	0:50	6:54	13:17	20:04
			2.1	4.5	0.2	4.5
	Th	7	1:44	8:00	13:50	20:26
			1.3	4.4	0.5	5.0
	F	8	2:32	8:58	14:20	20:49
			0.6	4.2	0.8	5.5
●	S	9	3:17	9:50	14:47	21:16
			0.1	3.9	1.1	5.9
	S	10	4:00	10:42	15:13	21:43
			—0.3	3.6	1.5	6.1
	M	11	4:44	11:36	15:39	22:12
			—0.4	3.2	1.8	6.1
S	Tu	12	5:29	12:32	15:59	22:43
			—0.4	2.9	2.1	6.0
	W	13	6:19	13:38	16:11	23:15
			—0.2	2.7	2.4	5.8
	Th	14	7:14	23:50	. . .	. . .
			0.0	5.5	. . .	. . .
	F	15	8:18	. . .	. . .	. . .
			0.2	. . .	. . .	. . .
A	S	16	0:30	9:19	. . .	. . .
			5.2	0.4	. . .	. . .
☽	S	17	1:12	10:14	. . .	. . .
			4.9	0.5	. . .	. . .
	M	18	2:08	10:58	19:45	22:38
			4.5	0.6	3.3	3.1
	Tu	19	3:21	11:36	19:29	23:51
			4.1	0.7	3.6	2.5
E	W	20	4:55	12:10	19:31	. . .
			3.7	0.8	4.0	. . .
	Th	21	0:50	6:27	12:42	19:48
			1.8	3.5	0.9	4.4
	F	22	1:40	7:40	13:14	19:58
			1.0	3.4	1.0	5.0
	S	23	2:35	8:41	13:45	20:20
			0.2	3.3	1.2	5.5
	S	24	3:08	9:38	14:16	20:46
			—0.5	3.2	1.4	6.0
○	M	25	3:52	10:34	14:45	21:17
			—1.0	3.1	1.7	6.3
	Tu	26	4:39	11:31	15:15	21:51
			—1.3	3.0	2.0	6.5
N	W	27	5:29	12:30	15:43	22:30
			—1.4	2.9	2.3	6.6
P	Th	28	6:24	13:32	16:10	23:15
			—1.3	2.8	2.5	6.5
	F	29	7:25	14:43	16:36	. . .
			—1.1	2.8	2.7	. . .
	S	30	0:05	8:28	. . .	. . .
			6.2	—0.8	. . .	. . .

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:59	9:27	. . .	. . .
			5.7	—0.5	. . .	. . .
	M	2	2:01	10:21	18:00	22:01
			5.1	—0.2	3.4	3.0
E	Tu	3	3:20	11:06	18:24	23:39
			4.4	0.2	3.8	2.4
	W	4	5:07	11:50	18:51	. . .
			3.8	0.5	4.4	. . .
	Th	5	0:53	6:50	12:28	19:19
			1.6	3.4	0.9	4.9
	F	6	1:50	8:09	13:03	19:49
			0.9	3.3	1.2	5.4
	S	7	2:39	9:12	13:37	20:19
			0.2	3.2	1.4	5.9
	S	8	3:22	10:06	14:09	20:50
			—0.3	3.1	1.7	6.2
●	M	9	4:02	10:57	14:39	21:22
			—0.6	3.0	1.9	6.3
S	Tu	10	4:41	11:45	15:09	21:55
			—0.6	3.0	2.1	6.4
	W	11	5:22	12:35	15:35	22:28
			—0.5	2.9	2.3	6.3
	Th	12	6:06	13:26	15:57	23:00
			—0.4	2.8	2.5	6.1
	F	13	6:51	14:23	16:14	23:34
			—0.1	2.8	2.7	5.8
A	S	14	7:36	15:36	16:20	. . .
			0.1	2.8	2.8	. . .
	S	15	0:08	8:19	. . .	. . .
			5.5	0.3	. . .	. . .
	M	16	0:43	8:58	. . .	. . .
			5.0	0.5	. . .	. . .
☽ E	Tu	17	1:25	9:37	17:44	21:44
			4.4	0.7	3.2	2.8
	W	18	2:17	10:13	17:55	23:19
			3.8	0.9	3.6	2.3
	Th	19	3:30	10:52	18:13	. . .
			3.1	1.1	4.0	. . .
	F	20	0:29	5:37	11:33	18:37
			1.5	2.6	1.3	4.6
	S	21	1:26	7:43	12:15	19:06
			0.6	2.5	1.5	5.2
	S	22	2:16	8:58	12:58	19:40
			—0.2	2.6	1.7	5.8
	M	23	3:01	9:56	13:39	20:19
			—0.9	2.8	1.9	6.4
N ○	Tu	24	3:47	10:46	14:20	19:59
			—1.3	2.9	2.1	6.8
	W	25	4:33	11:33	14:58	21:43
			—1.6	3.0	2.2	7.0
P	Th	26	5:22	12:20	15:38	22:30
			—1.6	3.0	2.3	7.1
	F	27	6:12	13:05	16:19	23:17
			—1.5	3.0	2.4	6.9
	S	28	7:03	13:51	17:07	. . .
			—1.2	3.1	2.5	. . .
	S	29	0:08	7:56	14:38	18:10
			6.4	—0.7	3.2	2.6
E	M	30	0:58	8:42	15:23	19:47
			5.7	—0.2	3.4	2.6
☾	Tu	31	1:56	9:27	16:11	21:47
			4.8	0.3	3.7	2.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	0:15 3.0	6:32 6.4	13:10 1.1	20:06 5.8
	Tu	2	1:28 3.4	7:25 6.8	14:17 0.3	21:20 6.0
	W	3	2:33 3.6	8:18 7.2	15:14 −0.5	22:19 6.2
N ○ P	Th	4	3:27 3.7	9:08 7.7	16:03 −1.2	23:08 6.4
	F	5	4:11 3.6	9:56 8.0	16:52 −1.7	23:53 6.4
	S	6	4:54 3.4	10:43 8.3	17:37 −1.9	. . . . .
	S	7	0:35 6.5	5:37 8.1	11:31 8.5	18:22 −1.7
	M	8	1:13 6.5	6:20 2.8	12:20 8.5	19:07 −1.3
	Tu	9	1:51 6.5	7:07 2.5	13:11 8.1	19:51 −0.6
E	W	10	2:30 6.6	7:57 2.2	14:07 7.6	20:35 0.3
☾	Th	11	3:11 6.7	8:55 2.0	15:08 7.0	21:25 1.2
	F	12	3:55 6.6	9:58 1.9	16:18 6.3	22:22 2.2
	S	13	4:43 6.5	11:06 1.7	17:45 5.8	23:27 2.9
	S	14	5:35 6.5	12:32 1.4	19:24 5.7	. . . . .
	M	15	0:41 3.6	6:32 6.6	13:50 0.9	20:44 5.6
	Tu	16	1:56 3.9	7:28 6.7	14:48 0.4	21:45 5.7
S	W	17	2:57 3.9	8:20 7.0	15:35 −0.1	22:30 5.9
A	Th	18	3:42 3.8	9:08 7.3	16:12 −0.5	23:06 6.0
●	F	19	4:17 3.7	9:50 7.5	16:45 −0.7	23:36 6.2
	S	20	4:48 3.4	10:27 7.7	17:13 −0.8	. . . . .
	S	21	0:00 6.4	5:12 3.1	11:00 7.8	17:42 −0.8
	M	22	0:26 6.5	5:41 2.8	11:35 7.9	18:06 −0.8
	Tu	23	0:56 6.8	6:12 2.4	12:12 7.9	18:40 −0.5
	W	24	1:16 7.0	6:47 2.1	12:50 7.7	19:13 −0.1
E	Th	25	1:46 7.0	7:25 1.8	13:30 7.3	19:50 0.4
	F	26	2:18 7.0	8:08 1.6	14:17 6.9	20:30 1.2
☽	S	27	2:55 6.8	8:58 1.5	15:12 6.4	21:12 2.1
	S	28	3:35 6.6	9:55 1.4	16:33 5.7	22:03 3.0
	M	29	4:25 6.4	11:07 1.3	18:05 5.2	23:10 3.8
	Tu	30	5:29 6.3	12:38 1.0	20:20 5.1	. . . . .
N	W	31	0:48 4.0	6:45 6.5	14:10 0.4	21:42 5.6

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:34 4.4	7:59 6.9	15:18 −0.4	22:32 6.0
P	F	2	3:38 4.0	9:03 7.5	16:10 −1.2	23:12 6.4
○	S	3	4:22 3.5	9:58 8.0	16:56 −1.6	23:45 6.7
	S	4	5:00 3.0	10:48 8.5	17:37 −1.7	. . . . .
	M	5	0:16 6.9	5:37 2.4	11:33 8.8	18:16 −1.4
E	Tu	6	0:46 7.1	6:13 1.8	12:20 8.8	18:50 −0.9
	W	7	1:15 7.4	6:53 1.3	13:05 8.4	19:25 −0.1
	Th	8	1:45 7.3	7:34 1.0	13:51 7.8	20:03 0.8
	F	9	2:17 7.2	8:20 1.0	14:42 7.1	20:38 1.7
☾	S	10	2:52 7.0	9:05 1.0	15:39 6.2	21:15 2.7
	S	11	3:33 6.7	10:16 1.3	16:58 5.4	22:00 3.5
	M	12	4:22 6.5	11:28 1.4	19:02 4.8	23:00 4.1
S	Tu	13	5:26 6.3	13:13 1.3	20:45 5.0	. . . . .
A	W	14	1:13 4.5	6:42 6.8	14:30 0.9	21:42 5.4
	Th	15	2:52 4.3	7:55 6.5	15:21 0.4	22:18 5.8
	F	16	3:40 3.9	8:52 6.9	15:58 0.0	22:47 6.1
	S	17	4:18 3.5	9:39 7.2	16:28 −0.3	23:11 6.5
●	S	18	4:37 3.0	10:17 7.6	16:55 −0.5	23:32 6.5
	M	19	5:00 2.5	10:52 7.9	17:20 −0.6	23:53 7.2
	Tu	20	5:27 1.9	11:26 8.1	17:47 −0.6	. . . . .
E	W	21	0:15 7.4	5:53 1.4	12:00 8.2	18:16 −0.3
	Th	22	0:39 7.5	6:25 0.9	12:35 8.1	18:48 0.1
	F	23	1:05 7.5	7:00 0.6	13:15 7.8	19:21 0.8
	S	24	1:35 7.4	7:40 0.6	13:59 7.2	19:55 1.7
	S	25	2:07 7.2	8:23 0.5	14:48 6.4	20:30 2.6
☽	M	26	2:42 6.9	9:17 0.8	15:58 5.5	21:13 3.6
	Tu	27	3:28 6.6	10:33 1.1	18:02 5.2	22:15 4.2
N	W	28	4:41 6.4	12:23 1.0	20:51 5.1	. . . . .
	Th	29	1:00 4.9	6:27 6.3	14:38 0.4	21:43 5.6

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	3:00 4.3	8:00 6.9	15:20 −0.3	22:20 6.3
	S	2	3:44 3.6	9:06 7.5	16:08 −0.9	22:51 6.7
○	S	3	4:20 2.7	10:00 8.3	16:48 −1.1	23:18 7.1
	M	4	4:52 1.9	10:47 8.8	17:24 −1.1	23:44 7.6
E	Tu	5	5:24 1.2	11:30 9.0	17:56 −0.6	. . . . .
	W	6	0:10 7.7	5:57 0.5	12:10 8·8	18:27 0.0
	Th	7	0:33 7.8	6:32 0.2	12:50 8.4	18:57 0.7
	F	8	1:00 7.7	7:07 0.0	13:30 7.7	19:24 1.5
	S	9	1:27 7.6	7:42 0.1	14:13 6.8	19:50 2.3
	S	10	2:58 7.1	8:25 0.4	15:08 5.8	20:28 3.0
☾	M	11	2:33 7.0	9:17 0.9	16:12 5.0	20:51 3.8
S	Tu	12	3:18 6.6	10:25 1.4	18:37 4.3	21:40 4.2
A	W	13	4:24 6.1	12:13 1.6	20:32 4.8	22:10 4.6
	Th	14	6:02 6.0	13:57 1.3	21:18 5.2	. . . . .
	F	15	2:45 4.3	7:34 6.1	14:51 0.9	21:46 5.8
	S	16	3:23 3.6	8:37 6.5	15:28 0.5	22:09 6.5
	S	17	3:51 3.0	9:23 7.0	15:58 0.2	22:30 7.0
	M	18	4:13 2.3	10:01 7.6	16:25 0.0	22:50 7.3
● E	Tu	19	4:36 1.6	10:36 8.0	16:51 0.0	23:10 7.6
	W	20	5:00 0.9	11:09 8.2	17:22 0.1	23:33 7.7
	Th	21	5:29 0.3	11:45 8.3	17:50 0.4	23:58 7.8
	F	22	6:00 −0.1	12:20 8.2	18:20 0.8	. . . . .
	S	23	0:25 7.8	6:37 −0.4	13:00 7.7	18:50 1.6
	S	24	0:58 7.7	7:14 −0.5	13:44 7.0	19:22 2.4
	M	25	1:26 7.5	8:00 −0.2	14:39 6.1	19:57 3.2
N ☽	Tu	26	2:08 7.1	8:58 0.3	15:55 5.1	20:37 4.0
	W	27	2:56 6.7	10:18 0.9	18:52 4.7	22:18 4.5
	Th	28	4:27 6.3	12:28 1.0	20:42 5.1	. . . . .
P	F	29	1:47 4.6	6:30 6.2	14:08 0.5	21:13 6.0
	S	30	2:47 3.8	8:02 6.7	15:08 −0.1	21:45 6.5
	S	31	3:27 2.7	9:06 7.6	15:50 −0.3	22:13 7.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Singapore Mean Local Civil, for the meridian 103° 51′ E.: 0h is midnight, 12h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator: A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	4:00	9:56	16:28	22:39
			1.7	8.3	—0.2	7.5
○	Tu	2	4:30	10:39	17:00	23:05
			0.8	8.7	0.1	7.7
	W	3	5:02	11:19	17:32	23:27
			0.1	8.8	0.5	7.8
	Th	4	5:33	11:59	17:58	23:52
			—0.4	8.5	1.1	7.9
	F	5	6:04	12:35	18:21	. . .
			—0.6	7.9	1.7	. . .
	S	6	0:17	6:38	13:14	18:44
			7.9	—0.8	7.2	2.3
	S	7	0:45	7:15	13:54	19:08
			7.8	—0.4	6.2	2.8
S	M	8	1:15	7:55	14:37	19:35
			7.5	0.1	5.5	3.3
☾	Tu	9	1:49	8:42	15:38	20:13
			7.0	0.7	5.0	4.0
A	W	10	2:37	9:40	17:27	21:03
			6.5	1.2	4.6	4.2
	Th	11	3:38	11:03	19:30	23:59
			5.9	1.6	5.2	4.7
	F	12	5:23	12:48	20:16	. . .
			5.7	1.7	5.6	. . .
	S	13	2:06	7:03	13:57	20:46
			4.0	5.9	1.4	6.2
	S	14	2:45	8:10	14:40	21:12
			3.2	6.3	1.1	6.6
	M	15	3:10	8:58	15:15	21:37
			2.4	6.8	0.9	7.0
E	Tu	16	3:35	9:38	15:48	22:02
			1.6	7.4	0.8	7.4
●	W	17	4:03	10:17	16:20	22:26
			0.8	7.8	0.8	7.6
	Th	18	4:31	10:52	16:50	22:50
			0.1	8.1	1.1	7.8
	F	19	5:02	11:28	17:20	23:18
			—0.6	8.1	1.5	8.0
	S	20	5:36	12:08	17:50	23:48
			—1.0	7.8	1.9	8.1
	S	21	6:14	12:52	18:23	. . .
			—1.2	7.3	2.4	. . .
N	M	22	0:21	6:57	13:41	19:00
			8.0	—1.0	6.6	3.1
P	Tu	23	0:59	7:48	14:42	19:38
			7.7	—0.5	5.8	3.8
☽	W	24	1:45	8:50	16:15	20:38
			7.2	0.1	4.9	4.1
	Th	25	2:52	10:14	18:22	22:43
			6.8	0.7	5.1	4.5
	F	26	4:34	12:09	19:38	. . .
			6.2	0.9	5.7	. . .
	S	27	1:13	6:30	13:37	20:22
			3.9	6.3	0.7	6.4
E	S	28	2:12	7:52	14:37	20:57
			2.8	6.9	0.6	6.9
	M	29	2:53	8:53	15:20	21:27
			1.8	7.6	0.7	7.3
	Tu	30	3:30	9:43	15:59	21:56
			0.9	8.1	0.8	7.5

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	4:05	10:28	16:34	22:22
			0.1	8.2	1.3	7.8
	Th	2	4:40	11:11	17:01	22:49
			—0.6	8.2	1.8	7.9
	F	3	5:12	11:51	17:25	23:15
			—1.0	7.4	2.2	8.0
	S	4	5:45	12:27	17:48	23:42
			—1.0	6.9	2.7	8.0
S	S	5	6:18	13:03	18:12	. . .
			—0.9	6.3	3.0	. . .
	M	6	0:12	6:53	13:40	18:40
			7.8	—0.5	5.8	3.2
	Tu	7	0:44	7:31	14:22	19:15
			7.4	—0.1	5.6	3.7
A	W	8	1:21	8:14	15:14	20:00
			7.0	0.5	5.4	3.9
☾	Th	9	2:07	9:05	16:20	21:00
			6.6	1.0	5.1	4.3
	F	10	3:10	10:10	17:40	22:58
			6.1	1.5	5.4	4.0
	S	11	4:40	11:24	18:43	. . .
			5.7	1.8	5.7	. . .
	S	12	0:47	6:15	12:37	19:27
			3.6	5.6	1.9	6.1
E	M	13	1:40	7:30	13:35	20:05
			2.8	6.0	1.8	6.5
	Tu	14	2:17	8:23	14:25	20:40
			1.9	6.5	1.8	6.9
	W	15	2:52	9:12	15:07	21:10
			1.1	7.0	1.8	7.3
	Th	16	3:25	9:55	15:43	21:40
			0.2	7.3	2.0	7.6
●	F	17	4:01	10:37	16:17	22:12
			—0.5	7.4	2.2	7.9
	S	18	4:40	11:20	16:52	22:45
			—1.1	7.4	2.5	8.1
N	S	19	5:20	12:05	17:27	23:22
P			—1.4	7.1	2.7	8.2
	M	20	6:05	12:54	18:05	. . .
			—1.5	6.8	3.0	. . .
	Tu	21	0:03	6:52	13:48	18:47
			8.1	—1.2	5.9	3.3
	W	22	0:49	7:47	14:50	19:44
			7.8	—0.7	5.6	3.9
☽	Th	23	1:46	8:50	16:05	21:00
			7.2	—0.1	5.2	4.2
	F	24	3:00	10:07	17:24	22:42
			6.8	0.5	5.6	3.7
	S	25	4:35	11:33	18:27	. . .
			6.5	1.0	6.2	. . .
E	S	26	0:20	6:12	12:50	19:17
			3.0	6.5	1.4	6.5
	M	27	1:25	7:30	13:53	20:00
			2.0	6.7	1.6	6.8
	Tu	28	2:17	8:36	14:47	20:37
			1.1	7.1	1.8	7.1
	W	29	3:03	9:34	15:29	21:10
			0.3	7.4	2.2	7.5
	Th	30	3:45	10:22	16:03	21:43
			—0.4	7.2	2.6	7.7
○	F	31	4:23	11:06	16:32	22:14
			—0.9	6.9	2.9	7.9

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:59	11:47	16:48	22:45
			—1.1	6.5	3.2	7.9
S	S	2	5:33	12:23	17:24	23:17
			—1.0	6.2	3.3	7.9
	M	3	6:04	12:58	17:52	23:50
			—0.9	5.9	3.3	7.7
A	Tu	4	6:37	13:33	18:27	. . .
			—0.6	5.6	3.3	. . .
	W	5	0:27	7:14	14:07	19:07
			7.4	—0.2	5.7	3.4
	Th	6	1:07	7:52	14:47	19:57
			7.0	0.3	5.8	3.5
	F	7	1:54	8:36	15:34	20:57
			6.6	0.7	5.9	3.5
☾	S	8	2:50	9:25	16:25	22:08
			6.2	1.2	6.0	3.4
E	S	9	4:00	10:25	17:16	23:22
			6.1	1.7	6.1	2.9
	M	10	5:18	11:28	18:06	. . .
			5.7	2.1	6.3	. . .
	Tu	11	0:27	6:38	12:32	18:56
			2.3	5.8	2.4	6.5
	W	12	1:20	7:50	13:31	19:42
			1.6	6.0	2.6	6.9
	Th	13	2:12	8:52	14:22	20:22
			0.7	6.4	2.8	7.2
	F	14	3:00	9:46	15:10	21:02
			—0.1	6.4	3.0	7.6
●	S	15	3:45	10:37	15:58	21:43
			—0.8	6.5	3.1	7.8
N	S	16	4:30	11:26	16:35	22:26
P			—1.3	6.5	3.2	8.1
	M	17	5:16	12:13	17:18	23:10
			—1.6	6.6	3.2	8.3
	Tu	18	6:08	13:00	18:01	23:59
			—1.6	6.2	3.3	8.2
	W	19	6:53	13:40	18:52	. . .
			—1.4	6.1	3.3	. . .
	Th	20	0:52	7:45	14:41	19:48
			7.9	—0.9	6.0	3.1
	F	21	1:51	8:40	15:32	20:53
			7.5	—0.2	6.1	3.0
☽	S	22	3:00	9:40	16:25	22:08
E			7.1	0.6	6.4	2.6
	S	23	4:18	10:43	17:18	23:24
			6.6	1.4	6.4	2.1
	M	24	5:43	11:55	18:10	. . .
			6.3	2.1	6.5	. . .
	Tu	25	0:37	7:10	13:05	19:00
			1.5	6.4	2.6	6.7
	W	26	1:45	8:26	14:07	19:47
			0.8	6.5	3.1	7.0
	Th	27	2:42	9:27	14:57	20:30
			0.1	6.3	3.3	7.3
	F	28	3:30	10:20	15:38	21:12
			—0.4	6.3	3.5	7.6
S	S	29	4:13	11:03	16:14	21:51
○			—0.8	6.2	3.6	7.8
	S	30	4:50	11:43	16:44	22:28
			—0.9	6.1	3.6	7.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Singapore Mean Local Civil, for the meridian 103° 51′ E.; 0^h is midnght, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	JULY.					
	M	1	5:23	12:16	17:13	23:03
			−0.9	6.1	3.4	7.8
A	Tu	2	5:53	12:45	17:46	23:40
			−0.8	6.1	3.3	7.7
	W	3	6:23	13:12	18:20	. . .
			−0.6	6.1	3.1	. . .
	Th	4	0:16	6:55	13:40	18:58
			7.5	−0.3	6.4	2.9
	F	5	0:55	7:28	14:10	19:40
			7.2	0.0	6.5	2.8
E	S	6	1:38	8:04	14:46	20:26
			7.0	0.5	6.6	2.6
☾	S	7	2:26	8:48	15:24	21:20
			6.6	1.0	6.6	2.4
	M	8	3:22	9:33	16:07	22:18
			6.1	1.7	6.5	2.1
	Tu	9	4:30	10:25	16:56	23:18
			5.8	2.3	6.4	1.7
	W	10	5:53	11:24	17:57	. . .
			5.5	2.9	6.5	. . .
	Th	11	0:30	7:25	12:33	18:47
			1.2	5.5	3.4	6.7
	F	12	1:42	8:50	13:47	19:43
			0.6	5.6	3.7	7.0
N	S	13	2:45	9:57	14:52	20:38
			−0.2	5.9	3.9	7.4
●	S	14	3:40	10:50	15:45	21:32
			−0.8	6.1	3.9	7.8
P	M	15	4:31	11:35	16:33	22:22
			−1.3	6.3	3.5	8.2
	Tu	16	5:18	12:15	17:18	23:11
			−1.6	6.4	3.1	8.4
	W	17	6:03	12:52	18:02	. . .
			−1.6	6.5	2.8	. . .
	Th	18	0:01	6:47	13:30	18:37
			8.5	−1.3	6.6	2.4
E	F	19	0:54	7:31	14:06	19:35
			8.3	−0.7	6.9	2.0
	S	20	1:47	8:15	14:45	20:27
			7.9	0.1	6.8	1.8
☽	S	21	2:44	9:00	15:27	21:27
			7.3	1.0	6.8	1.6
	M	22	3:50	9:55	16:13	22:29
			6.7	2.0	6.6	1.4
	Tu	23	5:10	10:52	17:04	23:50
			6.0	2.9	6.6	1.2
	W	24	6:48	12:01	18:00	. . .
			5.8	3.6	6.6	. . .
	Th	25	1:16	8:18	13:25	19:02
			0.8	5.5	4.1	6.7
S	F	26	2:25	9:27	14:38	20:00
			0.4	5.6	4.2	7.0
	S	27	3:20	10:17	15:30	20:52
			−0.1	5.9	3.9	7.2
	S	28	4:02	10:55	16:10	21:38
			−0.4	6.0	3.7	7.4
○ A	M	29	4:38	11:28	16:42	22:20
			−0.6	6.2	3.4	7.6
	Tu	30	5:09	11:53	17:08	22:55
			−0.7	6.4	3.1	7.7
	W	31	5:36	12:16	17:37	23:30
			−0.7	6.5	2.7	7.8
	AUGUST.					
	Th	1	6:00	12:40	18:05	. . .
			−0.6	6.8	2.3	. . .
	F	2	0:03	6:30	13:02	18:37
			7.8	−0.3	7.0	2.0
E	S	3	0:40	6:58	13:30	19:12
			7.6	0.1	7.1	1.7
	S	4	1:19	7:35	13:58	19:52
			7.3	0.5	7.1	1.5
	M	5	2:00	8:08	14:30	20:40
			6.9	1.3	7.0	1.3
☾	Tu	6	2:51	8:48	15:08	21:27
			6.5	2.0	6.7	1.3
	W	7	3:52	9:33	15:53	22:30
			5.8	2.8	6.6	1.3
	Th	8	5:17	10:28	16:50	23:53
			5.2	3.7	6.4	1.1
N	F	9	7:27	11:47	18:05	. . .
			4.8	4.2	6.5	. . .
	S	10	1:28	9:12	13:40	19:24
			0.6	5.3	4.4	6.8
	S	11	2:47	10:07	15:03	20:33
			0.0	5.7	4.2	7.3
P	M	12	3:45	10:47	15:55	21:32
			−0.7	6.2	3.7	7.9
●	Tu	13	4:32	11:21	16:36	22:26
			−1.2	6.5	3.0	8.4
	W	14	5:15	11:52	17:13	23:13
			−1.4	6.8	2.3	8.8
E	Th	15	5:53	12:22	17:52	23:59
			−1.3	6.1	1.7	8.8
	F	16	6:30	12:52	18:32	. . .
			−0.8	7.3	1.2	. . .
	S	17	0:45	7:05	13:21	19:12
			8.6	−0.1	7.4	0.8
	S	18	1:30	7:44	13:55	19:56
			8.1	0.8	7.3	0.8
☽	M	19	2:20	8:20	14:29	20:43
			7.3	1.7	7.0	0.7
	Tu	20	3:18	8:57	15:10	21:43
			6.4	2.6	6.9	1.0
	W	21	4:37	9:40	15:59	23:02
			5.6	3.5	6.6	1.2
S	Th	22	6:31	10:42	17:05	. . .
			4.9	4.2	6.4	. . .
	F	23	0:47	8:22	12:57	18:25
			1.2	5.1	4.5	6.4
	S	24	2:10	9:21	14:36	19:42
			0.8	5.4	4.2	6.6
A	S	25	3:05	10:00	15:27	20:42
			0.4	5.8	3.7	6.8
	M	26	3:47	10:30	16:02	21:28
			0.0	6.2	3.3	7.3
	Tu	27	4:18	10:55	16:28	22:10
			−0.2	6.5	2.8	7.7
○	W	28	4:45	11:16	16:52	22:43
			−0.4	7.0	2.3	7.9
	Th	29	5:10	11:37	17:15	23:15
			−0.3	7.2	1.8	8.0
E	F	30	5:32	11:57	17:40	23:47
			−0.2	7.4	1.3	8.0
	S	31	6:00	12:19	18:10	. . .
			0.0	7.5	0.8	. . .
	SEPTEMBER.					
	S	1	0:20	6:30	12:43	18:42
			7.9	0.4	7.6	0.6
	M	2	0:57	6:58	13:10	19:20
			7.7	1.0	7.4	0.4
	Tu	3	1:37	7:30	13:41	20:01
			7.2	1.7	7.2	0.4
☾	W	4	2:24	8:06	14:14	20:50
			6.4	2.5	7.2	0.6
	Th	5	3:27	8:42	14:58	21:57
			5.6	3.4	6.8	1.0
N	F	6	5:07	9:37	16:03	23:35
			4.8	4.2	6.5	1.1
	S	7	8:12	11:32	17:44	. . .
			4.8	4.7	6.2	. . .
	S	8	1:34	9:16	14:25	19:25
			0.7	5.3	4.6	6.7
	M	9	2:28	9:52	15:15	20:38
			0.0	6.0	3.7	7.3
P	Tu	10	3:40	10:28	15:57	21:35
			−0.6	6.5	2.8	8.1
●	W	11	4:22	10:52	16:27	22:24
			−0.9	7.0	1.9	8.7
E	Th	12	5:00	11:17	17:00	23:08
			−0.8	7.5	1.1	9.0
	F	13	5:33	11:43	17:34	23:48
			−0.4	7.7	0.4	8.9
	S	14	6:07	12:08	18:08	. . .
			0.1	7.8	0.0	. . .
	S	15	0:30	6:38	12:37	18:45
			8.5	0.9	7.7	−0.2
	M	16	1:12	7:05	13:05	19:22
			7.8	1.6	7.7	−0.2
	Tu	17	1:57	7:33	13:39	20:08
			7.0	2.4	7.4	0.2
☽	W	18	2:50	8:02	14:14	21:02
			6.0	3.2	7.0	0.7
S	Th	19	4:01	8:32	15:01	22:12
			5.1	4.3	6.6	1.2
	F	20	6:19	9:35	16:12	. . .
			4.5	4.3	6.1	. . .
	S	21	0:06	8:05	12:17	17:54
			1.5	4.9	4.7	6.0
A	S	22	1:40	8:54	14:28	19:25
			1.2	5.5	4.2	6.1
	M	23	2:37	9:25	15:08	20:28
			0.9	6.1	3.4	6.6
	Tu	24	3:15	9:50	15:38	21:14
			0.6	6.6	2.8	7.1
	W	25	3:45	10:10	16:01	21:52
			0.4	7.0	2.1	7.5
E ○	Th	26	4:10	10:31	16:23	22:25
			0.3	7.3	1.4	7.9
	F	27	4:37	10:52	16:47	22:56
			0.3	7.6	0.7	8.0
	S	28	5:03	11:13	17:13	23:28
			0.4	7.7	0.3	8.2
	S	29	5:30	11:35	17:42	. . .
			0.7	7.8	−0.2	. . .
	M	30	0:02	5:57	12:00	18:16
			8.0	1.1	8.0	−0.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Singapore Mean Local Civil for the meridian 103° 51′ E.; 0ʰ is midnight, 12ʰ is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	0:38	6:25	12:28	18:50
			7.6	1.7	7.8	−0.6
	W	2	1:20	6:57	12:58	19:34
			7.0	2.3	7.6	−0.3
N	Th	3	2:12	7:30	13:34	20:28
			6.2	3.0	7.2	0.2
☾	F	4	3:21	8:10	14:20	21:42
			5.3	3.9	6.8	0.8
	S	5	5:38	9:17	15:43	23:30
			4.5	4.3	6.4	1.1
	S	6	7:58	12:52	17:47	. . .
			5.1	4.8	6.2	. . .
	M	7	1:27	8:45	14:17	19:30
			0.8	5.8	8.8	6.6
P	Tu	8	2:35	9:18	15:00	20:38
			0.3	6.5	2.8	7.4
E	W	9	3:23	9:46	15:33	21:31
			0.0	7.1	1.7	8.2
●	Th	10	4:02	10:18	16:05	22:16
			0.0	7.5	0.8	8.6
	F	11	4:37	10:38	16:38	22:58
			0.2	7.7	0.0	8.8
	S	12	5:10	11:04	17:10	23:38
			0.6	7.9	−0.6	8.5
	S	13	5:37	11:30	17:45	. . .
			1.2	8.0	−0.9	. . .
	M	14	0:18	6:02	11:57	18:20
			8.0	1.9	8.8	−0.9
	Tu	15	1:00	6:28	12:25	19:00
			7.2	2.5	7.9	−0.6
S	W	16	1:41	6:58	12:57	19:40
			6.1	3.0	7.6	−0.1
	Th	17	2:30	7:25	13:33	20:30
			5.4	3.4	7.1	0.5
☽	F	18	3:33	8:00	14:20	21:30
			4.6	4.2	6.6	1.2
A	S	19	5:27	9:05	15:30	23:00
			4.6	4.2	6.0	1.6
	S	20	7:08	12:35	17:18	. . .
			5.0	4.5	5.7	. . .
	M	21	0:45	7:55	13:53	18:57
			1.7	5.5	3.8	5.9
	Tu	22	1:45	8:25	14:32	20:00
			1.5	6.2	3.0	6.2
	W	23	2:27	8:52	14:59	20:48
			1.3	6.6	2.2	6.7
E	Th	24	3:00	9:18	15:25	21:27
			1.2	7.1	1.4	7.2
	F	25	3:31	9:42	15:48	22:02
			1.0	7.3	0.7	7.6
○	S	26	4:00	10:05	16:15	22:37
			1.1	7.7	0.0	7.8
	S	27	4:28	10:30	16:45	23:10
			1.3	7.9	−0.6	7.8
	M	28	4:57	10:56	17:15	23:48
			1.6	8.0	−1.1	7.6
	Tu	29	5:25	11:25	17:53	. . .
			2.0	8.1	−1.2	. . .
N	W	30	0:38	6:00	11:57	18:34
			6.9	2.4	8.0	−1.1
	Th	31	1:17	6:32	12:33	19:21
			6.6	2.9	7.8	−0.7

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	2:13	7:12	13:16	20:19
			5.9	3.5	7.4	−0.1
☾	S	2	3:32	8:05	14:14	21:35
			5.4	4.2	6.7	0.6
P	S	3	5:27	9:41	15:47	23:18
			4.5	4.3	6.4	1.0
	M	4	7:01	12:28	17:47	. . .
			5.5	4.0	6.2	. . .
	Tu	5	0:58	7:51	13:42	19:20
			1.0	6.3	3.1	6.6
E	W	6	2:05	8:30	14:27	20:27
			0.9	6.8	1.9	7.3
	Th	7	2:54	9:00	15:05	21:20
			0.9	7.1	0.9	7.9
	F	8	3:35	9:32	15:44	22:07
			1.0	7.5	0.0	8.1
●	S	9	4:13	10:00	16:22	22:55
			1.4	7.9	−0.8	7.9
	S	10	4:42	10:28	16:57	23:35
			1.9	8.0	−1.2	7.5
	M	11	5:08	10:57	17:30	. . .
			2.4	8.2	−1.3	. . .
S	Tu	12	0:14	5:33	11:26	18:05
			6.9	2.7	8.2	−1.2
	W	13	0:52	5:58	11:58	18:41
			6.3	3.0	8.0	−0.8
	Th	14	1:33	6:27	12:32	19:20
			5.5	3.4	7.7	−0.3
	F	15	2:15	7:03	13:10	20:03
			5.3	3.6	7.1	0.3
A	S	16	3:05	7:50	13:57	20:53
			5.1	3.9	6.6	0.9
☽	S	17	4:08	9:00	15:00	21:55
			5.3	4.2	6.1	1.5
	M	18	5:20	10:47	16:26	23:06
			5.5	4.0	5.6	1.8
	Tu	19	6:21	12:32	18:00	. . .
			5.3	3.5	5.5	. . .
E	W	20	0:17	7:06	13:27	19:15
			2.0	6.1	2.8	5.8
	Th	21	1:17	7:43	14:03	20:12
			2.1	6.5	2.0	6.3
	F	22	2:07	8:20	14:38	21:01
			2.1	6.8	1.1	6.7
	S	23	2:46	8:51	15:13	21:42
			2.1	7.3	0.3	7.0
○	S	24	3:23	9:21	15:47	22:23
			2.2	7.6	−0.5	6.9
	M	25	3:57	9:51	16:23	23:03
			2.4	7.9	−1.0	6.8
	Tu	26	4:30	10:26	17:02	23:46
			2.5	8.1	−1.4	6.6
N	W	27	5:05	11:02	17:43	. . .
			2.7	8.3	−1.5	. . .
P	Th	28	0:30	5:41	11:41	18:29
			6.4	3.0	8.2	−1.3
	F	29	1:21	6:20	12:23	19:20
			6.0	3.1	8.0	−0.9
	S	30	2:17	7:12	13:17	20:17
			5.5	3.6	7.5	−0.3

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	3:22	8:17	14:22	21:25
			5.5	3.6	7.0	0.4
	M	2	4:35	9:45	15:48	22:43
			5.6	3.6	6.4	1.0
E	Tu	3	5:45	11:30	17:28	. . .
			6.0	3.2	6.3	. . .
	W	4	0:10	6:42	12:50	18:57
			1.6	6.3	2.3	6.5
	Th	5	1:20	7:30	13:50	20:12
			1.8	6.6	1.3	6.9
	F	6	2:21	8:12	14:42	21:14
			2.1	7.0	0.4	7.3
	S	7	3:10	8:50	15:28	22:08
			2.4	7.3	−0.4	7.1
●	S	8	3:48	9:25	16:10	22:54
			2.7	7.8	−1.0	6.9
	M	9	4:22	10:00	16:47	23:35
			3.0	8.0	−1.3	6.7
S	Tu	10	4:50	10:33	17:24	. . .
			3.2	8.1	−1.3	. . .
	W	11	0:14	5:17	11:07	17:58
			6.1	3.3	8.1	−1.2
	Th	12	0:50	5:45	11:42	18:30
			6.1	3.3	7.9	−0.8
	F	13	1:23	6:19	12:19	19:05
			5.9	3.4	7.6	−0.4
A	S	14	1:56	6:58	12:58	19:42
			5.8	3.4	7.2	0.1
	S	15	2:32	7:43	13:42	20:20
			6.0	3.3	6.7	0.6
	M	16	3:10	8:37	14:34	21:05
			6.0	3.3	6.3	1.2
☽ E	Tu	17	3:55	9:42	15:36	22:00
			6.0	3.2	5.8	1.7
	W	18	4:42	10:53	16:51	22:55
			6.1	3.0	5.5	2.3
	Th	19	5:33	12:00	18:13	23:58
			6.2	2.5	5.5	2.6
	F	20	6:26	12:59	19:21	. . .
			6.4	1.8	5.7	. . .
	S	21	1:01	7:18	13:55	20:38
			2.9	6.7	1.0	5.9
	S	22	1:58	8:02	14:45	21:33
			3.1	7.1	0.2	6.1
	M	23	2:50	8:44	15:31	22:25
			3.2	7.4	−0.6	6.2
N ○	Tu	24	3:35	9:26	16:15	23:10
			3.2	7.8	−1.2	6.4
	W	25	4:18	10:10	16:58	23:54
			3.2	8.1	−1.5	6.4
P	Th	26	4:58	10:56	17:43	. . .
			3.1	8.3	−1.7	. . .
	F	27	0:37	5:40	11:38	18:30
			6.3	3.0	8.6	−1.5
	S	28	1:20	6:25	12:27	19:17
			6.3	2.8	8.2	−1.1
	S	29	2:05	7:17	13:23	20:07
			6.2	2.8	7.9	−0.4
E	M	30	2:53	8:13	14:24	21:00
			6.1	2.6	7.4	0.3
☾	Tu	31	3:42	9:20	15:37	21:57
			6.3	2.5	6.8	1.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Singapore Mean Local Civil for the meridian 108° 51′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.				FEBRUARY.				MARCH.			
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.	Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.	Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.
	M	1	8:24 2.3 18:05 −0.3		Th	1	8:59 3.0 18:24 −0.9	P	F	1	8:42 2.7 17:33 −0.6
	Tu	2	8:40 2.6 18:30 −0.6	P	F	2	9:34 3.0 18:56 −0.8		S	2	9:17 2.6 17:55 −0.4
	W	3	9:08 2.9 19:02 −0.8	○	S	3	10:09 3.0 19:24 −0.7	○	S	3	9:52 2.4 18:08 −0.2
N ○ P	Th	4	9:43 3.1 19:39 −0.9		S	4	10:42 2.8 19:48 −0.4		M	4	0:47 0.7 2:14 0.6 10:18 2.1 18:11 0.1
	F	5	10:20 3.2 20:18 −0.9		M	5	11:07 2.4 20:00 −0.2	E	Tu	5	0:27 0.8 3:39 0.7 10:38 1.7 17:59 0.3
	S	6	10:57 3.1 20:56 −0.8	E	Tu	6	11:20 2.0 20:01 0.1		W	6	0:32 1.1 4:58 0.8 10:37 1.3 17:34 0.4
	S	7	11:30 2.9 21:32 −0.6		W	7	10:58 1.6 19:45 0.3		Th	7	0:57 1.3 7:07 1.0 9:09 1.1 16:33 0.4
	M	8	11:54 2.5 22:00 −0.4		Th	8	9:02 1.4 18:40 0.3		F	8	1:22 1.4 15:20 0.2
	Tu	9	12:00 2.1 22:21 −0.1		F	9	7:15 1.5 16:57 0.2		S	9	2:00 1.5 14:58 −0.1
E	W	10	11:05 1.7 22:29 0.1	☾	S	10	7:18 1.7 16:23 −0.1		S	10	5:05 1.6 14:59 −0.3
☾	Th	11	9:07 1.7 22:00 0.3		S	11	7:40 1.9 16:29 −0.3	☾	M	11	6:25 1.7 15:20 −0.4
	F	12	8:29 1.8 18:24 0.2		M	12	8:03 2.0 16:49 −0.4	S	Tu	12	7:13 1.8 15:41 −0.4
	S	13	8:28 2.0 17:45 −0.1	S	Tu	13	8:28 2.1 17:13 −0.5	A	W	13	7:47 1.9 16:05 −0.4
	S	14	8:39 2.2 17:56 −0.4	A	W	14	8:48 2.1 17:39 −0.5		Th	14	8:13 1.9 16:28 −0.3
	M	15	8:53 2.3 18:18 −0.5		Th	15	9:06 2.2 18:03 −0.4		F	15	8:32 1.9 16:48 −0.2
	Tu	16	9:09 2.3 18:42 −0.6		F	16	9:23 2.2 18:24 −0.3		S	16	8:49 1.9 16:59 −0.1
S	W	17	9:23 2.3 19:09 −0.6		S	17	9:38 2.2 18:39 −0.2		S	17	9:03 1.8 17:00 0.1 23:56 0.9
A	Th	18	9:38 2.4 19:34 −0.5	●	S	18	9:51 2.2 18:43 −0.1		M	18	2:19 0.8 9:20 1.7 16:58 0.2 23:23 1.0
●	F	19	9:54 2.4 19:54 −0.4		M	19	10:06 2.1 18:44 0.0	● E	Tu	19	3:15 0.8 9:41 1.5 16:48 0.3 23:13 1.1
	S	20	10:12 2.4 20:12 −0.4		Tu	20	10:22 1.9 18:41 0.1		W	20	4:14 0.8 9:58 1.3 16:34 0.4 23:19 1.3
	S	21	10:32 2.4 20:28 −0.3	E	W	21	10:31 1.7 18:35 0.3		Th	21	5:24 0.7 10:10 1.0 16:10 0.4 23:31 1.5
	M	22	10:46 2.3 20:41 −0.2		Th	22	10:25 1.4 18:10 0.4		F	22	7:45 0.6 9:15 0.7 15:21 0.4 23:55 1.7
	Tu	23	11:00 2.1 20:53 −0.1		F	23	2:36 1.1 4:04 1.0 9:06 1.2 17:18 0.4		S	23	14:13 0.1
	W	24	10:56 1.9 21:03 0.1		S	24	4:34 1.3 15:59 0.2		S	24	0:34 1.8 13:55 −0.2
E	Th	25	10:24 1.6 21:00 0.3		S	25	5:24 1.6 15:31 −0.1		M	25	1:50 1.9 14:14 −0.5
	F	26	9:01 1.5 19:55 0.4	☽	M	26	6:05 1.9 15:40 −0.4	N ☽	Tu	26	4:25 2.0 14:42 −0.7
☽	S	27	7:55 1.6 17:32 0.2		Tu	27	6:45 2.2 16:03 −0.7		W	27	5:49 2.2 15:12 −0.7
	S	28	7:30 1.8 16:47 −0.1	N	W	28	7:27 2.5 16:32 −0.8		Th	28	6:48 2.3 15:42 −0.7
	M	29	7:34 2.1 16:54 −0.4		Th	29	8:05 2.7 17:04 −0.8	P	F	29	7:37 2.3 16:08 −0.5
	Tu	30	7:55 2.5 17:18 −0.7						S	30	8:17 2.1 16:25 −0.2 23:28 0.9
N	W	31	8:24 2.8 17:50 −0.8						S	31	1:47 0.8 8:53 1.9 16:31 0.0 23:00 1.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 0.9 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Batavia Mean Local Civil for the meridian 106° 53′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	3:10	9:26	16:25	22:55
			0.8	1.5	0.3	1.2
○	Tu	2	4:30	9:53	16:03	23:00
			0.7	1.1	0.4	1.5
	W	3	6:01	10:07	15:20	23:11
			0.7	0.8	0.5	1.7
	Th	4	14:05	23:26	. . .	. . .
			0.8	1.8	. . .	. . .
	F	5	12:53	23:40	. . .	. . .
			0.1	1.9	. . .	. . .
	S	6	12:54	23:43	. . .	. . .
			−0.1	1.9	. . .	. . .
	S	7	13:13	23:41	. . .	. . .
			−0.3	1.8	. . .	. . .
S	M	8	13:38	23:23	. . .	. . .
			−0.3	1.7	. . .	. . .
☾	Tu	9	14:05	23:09	. . .	. . .
			−0.4	1.6	. . .	. . .
A	W	10	2:39	5:40	14:32	23:08
			1.5	1.6	−0.4	1.5
	Th	11	2:25	6:35	14:55	23:05
			1.4	1.6	−0.3	1.4
	F	12	2:30	7:10	15:12	23:05
			1.3	1.6	−0.2	1.3
	S	13	2:42	7:38	15:22	22:53
			1.2	1.5	0.0	1.3
	S	14	2:59	7:59	15:22	22:32
			1.1	1.4	0.1	1.3
	M	15	3:30	8:22	15:12	22:13
			1.0	1.2	0.3	1.3
E	Tu	16	4:12	8:51	14:58	22:05
			0.8	1.0	0.4	1.5
●	W	17	5:10	9:24	14:35	22:12
			0.6	0.8	0.4	1.8
	Th	18	6:25	10:12	13:57	22:27
			0.4	0.5	0.4	2.0
	F	19	8:20	22:53	. . .	. . .
			0.2	2.2	. . .	. . .
	S	20	11:05	23:28	. . .	. . .
			−0.1	2.3	. . .	. . .
	S	21	11:48	. . .	. . .	. . .
			−0.3	. . .	. . .	. . .
N	M	22	0:12	12:32	. . .	. . .
			2.3	−0.6	. . .	. . .
P	Tu	23	1:13	13:11	. . .	. . .
			2.3	−0.7	. . .	. . .
☽	W	24	2:50	13:47	. . .	. . .
			2.2	−0.7	. . .	. . .
	Th	25	4:36	14:17	. . .	. . .
			2.1	−0.6	. . .	. . .
	F	26	5:52	14:41	23:23	. . .
			1.9	−0.4	1.3	. . .
	S	27	1:55	6:50	14:53	22:23
			1.3	1.7	−0.1	1.3
E	S	28	2:54	7:40	14:54	22:08
			1.0	1.3	0.1	1.4
	M	29	4:22	8:23	14:34	22:02
			0.8	1.0	0.4	1.6
	Tu	30	6:00	9:14	13:42	22:04
			0.6	0.7	0.4	1.9

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	8:25	22:07	. . .	. . .
			0.3	2.0	. . .	. . .
	Th	2	9:34	22:20	. . .	. . .
			0.0	2.2	. . .	. . .
	F	3	10:12	22:34	. . .	. . .
			−0.2	2.2	. . .	. . .
	S	4	10:43	22:46	. . .	. . .
			−0.3	2.2	. . .	. . .
S	S	5	11:16	23:00	. . .	. . .
			−0.4	2.1	. . .	. . .
	M	6	11:50	23:05	. . .	. . .
			−0.4	2.0	. . .	. . .
	Tu	7	12:24	23:06	. . .	. . .
			−0.4	1.8	. . .	. . .
A	W	8	12:53	22:38	. . .	. . .
			−0.4	1.7	. . .	. . .
☾	Th	9	13:18	22:20	. . .	. . .
			−0.3	1.6	. . .	. . .
	F	10	13:40	22:08	. . .	. . .
			−0.2	1.6	. . .	. . .
	S	11	13:58	21:55	. . .	. . .
			−0.1	1.6	. . .	. . .
	S	12	13:52	21:40	. . .	. . .
			0.1	1.6	. . .	. . .
E	M	13	13:38	21:24	. . .	. . .
			0.3	1.7	. . .	. . .
	Tu	14	5:48	7:00	13:07	21:17
			0.5	0.6	0.4	1.8
	W	15	6:28	9:40	12:18	21:20
			0.3	0.5	0.4	2.1
	Th	16	7:13	21:37	. . .	. . .
			0.0	2.3	. . .	. . .
●	F	17	7:53	22:04	. . .	. . .
			−0.2	2.6	. . .	. . .
	S	18	8:47	22:38	. . .	. . .
			−0.5	2.7	. . .	. . .
N P	S	19	9:45	23:22	. . .	. . .
			−0.6	2.7	. . .	. . .
	M	20	10:40	. . .	. . .	. . .
			−0.7	. . .	. . .	. . .
	Tu	21	0:08	11:30	. . .	. . .
			2.7	−0.8	. . .	. . .
	W	22	0:55	12:12	. . .	. . .
			2.5	−0.7	. . .	. . .
☽	Th	23	1:40	12:46	. . .	. . .
			2.2	−0.6	. . .	. . .
	F	24	2:17	13:12	22:37	. . .
			1.8	−0.4	1.5	. . .
	S	25	13:28	21:35	. . .	. . .
			−0.1	1.6	. . .	. . .
E	S	26	13:15	21:20	. . .	. . .
			0.2	1.7	. . .	. . .
	M	27	12:38	21:17	. . .	. . .
			0.4	1.9	. . .	. . .
	Tu	28	7:24	21:22	. . .	. . .
			0.1	2.1	. . .	. . .
	W	29	7:45	21:26	. . .	. . .
			−0.2	2.3	. . .	. . .
	Th	30	8:15	21:37	. . .	. . .
			−0.4	2.3	. . .	. . .
○	F	31	8:42	21:50	. . .	. . .
			−0.5	2.4	. . .	. . .

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	9:10	22:10	. . .	. . .
			−0.5	2.4	. . .	. . .
S	S	2	9:35	22:30	. . .	. . .
			−0.5	2.3	. . .	. . .
	M	3	10:08	22:48	. . .	. . .
			−0.5	2.2	. . .	. . .
A	Tu	4	10:37	23:08	. . .	. . .
			−0.4	2.1	. . .	. . .
	W	5	11:06	23:02	. . .	. . .
			−0.4	2.0	. . .	. . .
	Th	6	11:35	22:33	. . .	. . .
			−0.3	1.8	. . .	. . .
	F	7	12:00	21:54	. . .	. . .
			−0.2	1.7	. . .	. . .
☾	S	8	12:18	21:23	. . .	. . .
			−0.1	1.7	. . .	. . .
E	S	9	12:20	21:00	. . .	. . .
			0.1	1.7	. . .	. . .
	M	10	12:03	20:44	. . .	. . .
			0.3	1.8	. . .	. . .
	Tu	11	10:50	20:35	. . .	. . .
			0.3	2.0	. . .	. . .
	W	12	6:34	20:37	. . .	. . .
			0.0	2.2	. . .	. . .
	Th	13	6:40	20:53	. . .	. . .
			−0.3	2.5	. . .	. . .
	F	14	7:03	21:24	. . .	. . .
			−0.5	2.7	. . .	. . .
●	S	15	7:38	21:56	. . .	. . .
			−0.7	2.9	. . .	. . .
N P	S	16	8:15	22:38	. . .	. . .
			−0.8	3.0	. . .	. . .
	M	17	9:00	23:20	. . .	. . .
			−0.9	2.9	. . .	. . .
	Tu	18	9:43	23:58	. . .	. . .
			−0.8	2.7	. . .	. . .
	W	19	10:25	. . .	. . .	. . .
			−0.7	. . .	. . .	. . .
	Th	20	0:28	11:02	. . .	. . .
			2.4	−0.5	. . .	. . .
	F	21	0:37	11:27	22:48	. . .
			2.0	−0.2	1.6	. . .
☽ E	S	22	11:38	20:53	. . .	. . .
			0.0	1.6	. . .	. . .
	S	23	11:24	20:30	. . .	. . .
			0.3	1.8	. . .	. . .
	M	24	7:08	20:33	. . .	. . .
			0.2	2.0	. . .	. . .
	Tu	25	6:22	20:43	. . .	. . .
			−0.1	2.2	. . .	. . .
	W	26	6:38	20:53	. . .	. . .
			−0.4	2.3	. . .	. . .
	Th	27	7:03	21:06	. . .	. . .
			−0.6	2.4	. . .	. . .
	F	28	7:30	21:22	. . .	. . .
			−0.6	2.4	. . .	. . .
S ○	S	29	7:55	21:38	. . .	. . .
			−0.6	2.4	. . .	. . .
	S	30	8:18	22:00	. . .	. . .
			−0.6	2.3	. . .	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 0.9 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Batavia Mean Local Civil for the meridian 106° 58′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.
JULY.			
	M	1	8:37 22:20
			−0.5 2.3
A	Tu	2	9:00 22:38
			−0.4 2.2
	W	3	9:18 22:50
			−0.4 2.1
	Th	4	9:44 22:45
			−0.3 1.9
	F	5	10:06 22:12
			−0.1 1.8
	S	6	10:22 21:13
			0.0 1.7
E ☾	S	7	10:20 20:28
			0.2 1.7
	M	8	9:34 20:00
			0.3 1.8
	Tu	9	6:02 19:50
			0.2 2.0
	W	10	5:28 19:53
			−0.1 2.2
	Th	11	5:37 20:12
			−0.4 2.5
	F	12	6:00 20:38
			−0.7 2.8
N	S	13	6:30 21:15
			−0.8 2.9
●	S	14	7:03 21:53
			−0.9 3.0
P	M	15	7:38 22:33
			−0.9 3.0
	Tu	16	8:10 23:06
			−0.8 2.8
	W	17	8:40 23:34
			−0.6 2.5
	Th	18	9:04 23:47
			−0.3 2.0
E	F	19	9:18 23:05
			−0.1 1.6
	S	20	9:13 20:14
			0.2 1.5
☽	S	21	8:05 19:25
			0.3 1.7
	M	22	5:33 19:33
			0.1 2.0
	Tu	23	5:05 19:52
			−0.2 2.1
	W	24	5:20 20:15
			−0.5 2.2
	Th	25	5:40 20:35
			−0.6 2.3
S	F	26	6:08 20:55
			−0.7 2.3
	S	27	6:35 21:13
			−0.6 2.3
	S	28	7:00 21:28
			−0.5 2.3
○ A	M	29	7:17 21:44
			−0.4 2.2
	Tu	30	7:30 22:00
			−0.3 2.2
	W	31	7:38 22:15
			−0.2 2.0
AUGUST.			
	Th	1	7:45 22:23
			−0.1 1.9
	F	2	7:48 22:14
			0.0 1.7
E	S	3	7:44 21:23
			0.2 1.5
	S	4	7:16 19:45
			0.3 1.5
	M	5	6:00 18:52
			0.3 1.6
☾	Tu	6	4:35 18:39
			0.1 1.8
	W	7	4:15 18:53
			−0.2 2.0
	Th	8	4:23 19:17
			−0.5 2.4
N	F	9	4:45 19:48
			−0.7 2.6
	S	10	5:13 20:25
			−0.8 2.8
	S	11	5:44 21:00
			−0.9 2.9
P	M	12	6:15 21:40
			−0.8 2.8
●	Tu	13	6:44 22:13
			−0.7 2.7
	W	14	7:02 22:42
			−0.4 2.3
E	Th	15	7:13 23:08
			−0.1 1.9
	F	16	7:12 14:50 16:20 22:46
			0.1 0.9 0.8 1.4
	S	17	6:46 15:35
			0.3 1.2
	S	18	5:40 16:40
			0.3 1.5
☽	M	19	4:08 17:38
			0.1 1.7
	Tu	20	3:43 18:27
			−0.2 1.9
	W	21	3:54 19:08
			−0.5 2.0
S	Th	22	4:14 19:43
			−0.6 2.1
	F	23	4:38 20:10
			−0.6 2.1
	S	24	5:04 20:32
			−0.5 2.0
A	S	25	5:26 20:48
			−0.4 2.0
	M	26	5:45 21:00
			−0.3 2.0
	Tu	27	5:55 21:13
			−0.2 1.9
○	W	28	5:55 21:25
			0.0 1.8
	Th	29	5:53 21:36
			0.1 1.6
E	F	30	5:42 13:13 15:28 21:38
			0.2 1.1 1.0 1.4
	S	31	5:28 13:00 16:56 21:10
			0.3 1.1 1.0 1.2
SEPTEMBER.			
	S	1	5:00 13:08
			0.3 1.3
	M	2	4:08 13:37
			0.3 1.5
	Tu	3	3:13 15:13
			0.1 1.6
☾	W	4	2:55 16:52
			−0.3 1.9
	Th	5	3:05 17:52
			−0.5 2.1
N	F	6	3:27 18:40
			−0.7 2.3
	S	7	3:55 19:24
			−0.8 2.5
	S	8	4:25 20:02
			−0.8 2.6
	M	9	4:53 20:40
			−0.7 2.5
P	Tu	10	5:13 21:15
			−0.5 2.3
●	W	11	5:25 12:00 14:30 21:45
			−0.2 0.8 0.7 1.9
E	Th	12	5:27 11:50 16:00 22:10
			0.1 1.0 0.8 1.5
	F	13	5:14 12:00 17:42 22.08
			0.3 1.2 0.8 1.0
	S	14	4:43 12:20
			0.3 1.5
	S	15	3:40 12:45
			0.3 1.7
	M	16	2:30 13:15
			0.0 1.8
	Tu	17	2:14 13:53
			−0.3 1.8
☽	W	18	2:25 16:40
			−0.5 1.8
S	Th	19	2:45 18:05
			−0.6 1.8
	F	20	3:10 12:32 13:20 18:55
			−0.6 1.5 1.4 1.8
	S	21	3:34 12:30 13:40 19:28
			−0.5 1.4 1.3 1.8
A	S	22	3:53 12:40 14:05 19:50
			−0.4 1.3 1.2 1.8
	M	23	4:10 12:48 13:40 20:08
			−0.3 1.2 1.1 1.7
	Tu	24	4:20 12:25 14:25 20:15
			−0.1 1.1 1.0 1.6
	W	25	4:15 11:45 15:10 20:25
			0.1 1.1 1.0 1.4
E ○	Th	26	4:05 11:18 15:56 20:37
			0.2 1.2 1.0 1.3
	F	27	3:48 11:03 17:02 20:46
			0.3 1.4 0.9 1.0
	S	28	3:35 11:06 18:55 20:25
			0.3 1.6 0.7 0.8
	S	29	3:05 11:15
			0.3 1.7
	M	30	2:26 11:34
			0.2 1.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 0.9 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Batavia Mean Local Civil for the meridian 106° 53′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:35 −0.1	12:06 2.0		
	W	2	1:28 −0.3	12:58 2.0		
N	Th	3	1:44 −0.6	14:43 2.1		
☾	F	4	2:11 −0.8	16:42 2.2		
	S	5	2:38 −0.9	17:53 2.3		
	S	6	3:05 −0.8	18:44 2.2		
	M	7	3:30 −0.6	19:27 2.1		
P	Tu	8	3:44 −0.4	11:12 1.1	18:44 1.0	20:08 1.8
E	W	9	3:48 −0.1	10:43 1.2	15:14 0.9	20:44 1.4
●	Th	10	3:42 0.2	10:37 1.4	16:44 0.8	21:08 1.0
	F	11	3:20 0.3	10:43 1.7	18:43 0.6	21:05 0.7
	S	12	2:35 0.3	10:55 1.9		
	S	13	1:17 0.1	11:15 2.1		
	M	14	0:22 −0.1	11:35 2.2		
	Tu	15	0:25 −0.4	11:48 2.1		
S	W	16	0:48 −0.5	11:55 2.0		
	Th	17	1:15 −0.6	11:47 1.9		
☽	F	18	1:40 −0.6	11:22 1.7		
A	S	19	2:03 −0.5	11:02 1.6	15:10 1.5	17:18 1.6
	S	20	2:25 −0.4	10:55 1.6	15:14 1.4	18:10 1.5
	M	21	2:40 −0.3	10:52 1.5	15:46 1.3	18:33 1.4
	Tu	22	2:52 −0.1	10:45 1.5	16:12 1.2	18:50 1.3
E	W	23	2:45 0.0	10:32 1.5	16:57 1.0	19:15 1.1
	Th	24	2:28 0.2	10:15 1.6		
	F	25	2:05 0.3	10:02 1.7		
○	S	26	1:37 0.3	10:05 1.9		
	S	27	1:03 0.2	10:16 2.2		
	M	28	0:05 0.0	10:38 2.3	23:32 −0.2	
	Tu	29	11:12 2.5	23:45 −0.5		
N	W	30	11:48 2.5			
	Th	31	0:15 −0.7	12:40 2.5		

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	0:45 −0.8	13:45 2.3		
☾	S	2	1:18 −0.9	15:15 2.2		
P	S	3	1:48 −0.8	16:42 2.0		
	M	4	2:10 −0.6	17:45 1.7		
	Tu	5	2:23 −0.3	10:20 1.4	14:50 1.2	18:35 1.3
E	W	6	2:24 0.0	9:57 1.6	16:35 0.8	19:16 0.9
	Th	7	2:05 0.2	9:48 1.8		
	F	8	1:22 0.3	9:52 2.0	23:17 0.1	
●	S	9	10:00 2.2	21:43 −0.2		
	S	10	10:20 2.4	22:06 −0.4		
	M	11	10:38 2.5	22:35 −0.5		
S	Tu	12	10:58 2.4	23:05 −0.6		
	W	13	11:14 2.3	23:35 −0.6		
	Th	14	11:28 2.2			
	F	15	0:06 −0.6	11:24 2.0		
A	S	16	0:34 −0.5	10:58 1.9		
☽	S	17	1:00 −0.5	10:28 1.8		
	M	18	1:17 −0.3	10:12 1.8		
	Tu	19	1:27 −0.2	9:57 1.8		
E	W	20	1:25 0.0	9:46 1.8		
	Th	21	1:04 0.2	9:33 1.8		
	F	22	0:27 0.2	9:23 2.0	21:25 0.2	
	S	23	9:23 2.2	20:55 0.0		
○	S	24	9:35 2.4	20:44 −0.3		
	M	25	9:58 2.6	21:08 −0.5		
	Tu	26	10:30 2.8	21:45 −0.7		
N	W	27	11:08 2.9	22:30 −0.8		
P	Th	28	11:48 2.8	23:13 −0.8		
	F	29	12:30 2.7	23:58 −0.8		
	S	30	13:10 2.4			

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:24 −0.7	13:37 2.1		
	M	2	0:50 −0.5	12:00 1.7		
E	Tu	3	1:02 −0.2	9:50 1.6		
	W	4	1:00 0.0	9:21 1.8		
	Th	5	0:30 0.2	9:13 2.0	19:53 0.1	
	F	6	9:18 2.3	19:40 −0.2		
	S	7	9:30 2.4	20:03 −0.5		
	S	8	9:45 2.5	20:34 −0.6		
●	M	9	10:04 2.6	21:00 −0.6		
S	Tu	10	10:24 2.6	21:30 −0.6		
	W	11	10:43 2.5	22:02 −0.6		
	Th	12	11:04 2.4	22:30 −0.5		
	F	13	11:14 2.3	22:58 −0.5		
A	S	14	11:16 2.1	23:23 −0.4		
	S	15	10:55 2.0	23:45 −0.3		
	M	16	10:11 1.9			
☽ E	Tu	17	0:02 −0.1	9:34 1.8		
	W	18	0:03 0.1	9:12 1.8	23:42 0.2	
	Th	19	9:00 1.9	22:15 0.3		
	F	20	8:48 2.0	18:56 0.0		
	S	21	8:48 2.3	18:54 −0.3		
	S	22	9:00 2.5	18:09 −0.5		
	M	23	9:24 2.8	19:36 −0.7		
N ○	Tu	24	9:55 2.9	20:11 −0.8		
	W	25	10:30 3.1	20:48 −0.8		
P	Th	26	11:04 3.1	21:28 −0.8		
	F	27	11:44 2.9	22:09 −0.7		
	S	28	12:11 2.6	22:44 −0.5		
	S	29	12:30 2.2	23:10 −0.3		
E	M	30	11:54 1.8	23:25 0.0		
☾	Tu	31	9:32 1.6	23:14 0.2		

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 0.9 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Batavia Mean Local Civil for the meridian 106° 53′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.: ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.						
	M	1	2:01	18:20					
			0.8	3.1					
	Tu	2	3:41	19:26					
			−0.3	3.5					
	W	3	4:50	20:33					
			−0.8	3.9					
N	Th	4	5:41	21:35					
○			−1.3	4.3					
P	F	5	6:25	22:33					
			−1.6	4.5					
	S	6	7:07	23:26					
			−1.6	4.5					
	S	7	7:44	15:05	16:13				
			−1.5	1.3	1.2				
	M	8	0:19	8:19	14:57	17:54			
			4.3	−1.2	1.3	1.1			
	Tu	9	1:10	8:50	15:10	19:10			
			4.0	−0.7	1.5	0.9			
E	W	10	2:00	9:17	15:30	20:23			
			3.4	−0.2	1.8	0.8			
☾	Th	11	2:51	9:34	15:51	21:41			
			2.8	0.4	2.1	0.7			
	F	12	3:48	9:37	16:15	23:14			
			2.0	0.8	2.4	0.6			
	S	13	5:07	9:12	16:46				
			1.4	1.0	2.8				
	S	14	1:14	17:25					
			0.4	3.0					
	M	15	3:39	18:17					
			0.0	3.2					
	Tu	16	4:44	19:22					
			−0.3	3.3					
S	W	17	5:23	20:27					
A			−0.6	3.4					
A	Th	18	5:51	21:25					
			−0.8	3.5					
●	F	19	6:16	22:15					
			−0.8	3.6					
	S	20	6:39	23:02					
			−0.9	3.6					
	S	21	7:04	14:11	16:21	23:42			
			−0.8	1.5	1.4	3.6			
	M	22	7:31	14:08	17:26				
			−0.7	1.5	1.2				
	Tu	23	0:21	7:55	14:19	18:20			
			3.5	−0.4	1.6	1.0			
	W	24	1:00	8:19	14:30	19:08			
			3.3	−0.2	1.7	0.8			
E	Th	25	1:39	8:35	14:40	20:05			
			3.0	0.2	1.9	0.6			
	F	26	2:19	8:47	14:54	21:07			
			2.6	0.5	2.3	0.5			
☽	S	27	3:05	8:50	15:13	22:26			
			2.0	0.8	2.6	0.4			
	S	28	4:07	8:41	15:45				
			1.4	0.9	3.0				
	M	29	0:10	6:58	7:51	16:31			
			0.2	1.0	0.9	3.4			
	Tu	30	2:16	17:34					
			−0.2	3.7					
N	W	31	3:55	18:53					
			−0.7	3.9					

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.						
	Th	1	4:52	20:14					
			−1.1	4.1					
P	F	2	5:35	21:26					
			−1.3	4.2					
○	S	3	6:12	22:29					
			−1.4	4.2					
	S	4	6:44	13:45	15:52	23:27			
			−1.2	1.3	1.2	4.1			
	M	5	7:14	18:35	17:29				
			−0.9	1.5	0.9				
E	Tu	6	0:20	7:40	13:46	18:36			
			3.8	−0.5	1.8	0.6			
	W	7	1:12	8:00	14:04	19:40			
			3.8	0.0	2.1	0.4			
	Th	8	2:02	8:15	14:26	20:43			
			2.7	0.4	2.5	0.2			
	F	9	2:54	8:19	14:47	21:51			
			2.1	0.7	2.8	0.2			
☾	S	10	3:52	8:05	15:12	23:12			
			1.4	0.9	3.1	0.1			
	S	11	5:20	7:29	15:42				
			1.0	0.9	3.3				
	M	12	1:00	16:18					
			0.0	3.3					
	Tu	13	3:21	17:08					
			−0.2	3.3					
S	W	14	4:22	18:25					
A			−0.4	3.2					
	Th	15	4:56	19:54					
			−0.5	3.2					
	F	16	5:23	21:04					
			−0.6	3.2					
	S	17	5:44	22:02					
			−0.6	3.2					
●	S	18	6:06	13:10	15:53	22:51			
			−0.5	1.5	1.4	3.2			
	M	19	6:31	12:57	16:59	23:35			
			−0.4	1.6	1.1	3.2			
	Tu	20	6:51	13:05	17:48				
			−0.2	1.8	0.8				
E	W	21	0:18	7:11	13:14	18:37			
			3.1	0.1	2.0	0.5			
	Th	22	1:00	7:28	13:26	19:26			
			2.8	0.4	2.3	0.3			
	F	23	1:45	7:37	13:42	20:21			
			2.4	0.6	2.6	0.1			
	S	24	2:33	7:37	14:00	21:25			
			1.9	0.9	3.0	−0.1			
	S	25	3:33	7:31	14:30	22:48			
			1.4	1.0	3.4	−0.2			
☽	M	26	5:19	7:04	15:08				
			1.0	0.9	3.7				
	Tu	27	0:20	15:57					
			−0.4	3.9					
N	W	28	2:10	17:00					
			−0.6	3.9					
	Th	29	3:34	18:37					
			−0.9	3.9					

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.						
P	F	1	4:28	20:00					
			−1.0	3.8					
	S	2	5:07	21:20					
			−1.0	3.8					
○	S	3	5:38	12:32	15:18	22:28			
			−0.8	1.4	1.3	3.6			
	M	4	6:04	12:16	16:53	23:30			
			−0.5	1.6	0.8	3.3			
E	Tu	5	6:27	12:26	17:57				
			−0.1	2.0	0.4				
	W	6	0:24	6:44	12:44	18:56			
			2.9	0.4	2.4	0.0			
	Th	7	1:19	6:57	13:05	19:53			
			2.4	0.7	2.9	−0.2			
	F	8	2:11	7:00	13:29	20:50			
			1.9	0.9	3.2	−0.3			
	S	9	3:09	6:53	13:54	21:50			
			1.4	1.0	3.5	−0.3			
	S	10	4:19	6:32	14:21	22:56			
			1.1	1.0	3.6	−0.3			
☾	M	11	14:50						
			3.6						
S	Tu	12	0:16	15:26					
A			−0.3	3.5					
A	W	13	1:53	16:10					
			−0.3	3.3					
	Th	14	3:10	17:16					
			−0.3	3.1					
	F	15	3:52	19:05					
			−0.3	2.9					
	S	16	4:25	20:37					
			−0.2	2.8					
	S	17	4:50	12:10	15:10	21:45			
			−0.2	1.6	1.5	2.8			
	M	18	5:15	11:22	16:22	22:41			
			0.0	1.8	1.2	2.7			
●	Tu	19	5:37	11:50	17:12	23:32			
E			0.2	2.0	0.8	2.6			
	W	20	5:56	12:00	18:02				
			0.4	2.2	0.3				
	Th	21	0:22	6:12	12:14	18:50			
			2.4	0.7	2.6	0.0			
	F	22	1:13	6:20	12:34	19:42			
			2.1	0.9	3.0	−0.4			
	S	23	2:09	6:21	12:55	20:37			
			1.8	1.1	3.5	−0.6			
	S	24	3:14	6:18	13:23	21:40			
			1.3	1.1	3.8	−0.8			
	M	25	14:00	22:51					
			4.1	−0.8					
N	Tu	26	14:42						
☽			4.2						
	W	27	0:11	15:32					
			−0.9	4.1					
	Th	28	1:35	16:35					
			−0.9	3.9					
P	F	29	2:44	18:04					
			−0.8	3.6					
	S	30	3:35	19:48					
			−0.7	3.2					
	S	31	4:14	11:18	14:37	21:18			
			−0.4	1.5	1.4	2.9			

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	4:40	11:00	16:12	22:34
			0.0	1.9	0.9	2.6
○	Tu	2	5:02	11:09	17:22	23:38
			0.4	2.3	0.2	2.3
	W	3	5:18	11:27	18:18	. . .
			0.8	2.8	−0.2	. . .
	Th	4	0:41	5:27	11:51	19:11
			2.0	1.1	3.2	−0.5
	F	5	1:38	5:29	12:18	20:00
			1.6	1.2	3.6	−0.7
	S	6	2:40	5:15	12:45	20:51
			1.3	1.2	3.9	−0.8
	S	7	3:58	5:08	13:13	21:41
			1.2	1.1	4.0	−0.8
S	M	8	13:43	22:34	. . . .	. . . .
			3.9	−0.7	. . . .	. . . .
☾	Tu	9	14:18	23:30	. . . .	. . . .
			3.8	−0.5	. . . .	. . . .
A	W	10	14:46	. . . .	. . . .	. . . .
			3.5	. . . .	. . . .	. . . .
	Th	11	0:26	15:28	. . . .	. . . .
			−0.4	3.2	. . . .	. . . .
	F	12	1:24	16:13	. . . .	. . . .
			−0.2	2.9	. . . .	. . . .
	S	13	2:15	17:41	. . . .	. . . .
			−0.1	2.5	. . . .	. . . .
	S	14	3:56	10:14	13:44	19:51
			0.1	1.7	1.5	2.3
	M	15	3:31	10:27	15:29	21:20
			0.3	1.9	1.3	2.2
E	Tu	16	3:59	10:31	16:31	22:31
			0.5	2.1	0.8	2.0
●	W	17	4:21	10:45	17:25	23:37
			0.8	2.5	0.3	1.9
	Th	18	4:36	11:08	18:15	. . .
			1.0	2.9	−0.2	. . .
	F	19	0:38	4:45	11:24	19:05
			1.7	1.2	3.4	−0.7
	S	20	1:45	4:46	11:51	19:58
			1.5	1.3	3.9	−1.0
	S	21	3:00	4:31	12:23	20:51
			1.3	1.2	4.2	−1.3
N	M	22	12:59	21:47	. . . .	. . . .
			4.5	−1.4	. . . .	. . . .
P	Tu	23	13:40	22:47	. . . .	. . . .
			4.6	−1.3	. . . .	. . . .
☽	W	24	14:25	23:48	. . . .	. . . .
			4.4	−1.2	. . . .	. . . .
	Th	25	15:14	. . . .	. . . .	. . . .
			4.1	. . . .	. . . .	. . . .
	F	26	0:46	16:14	. . . .	. . . .
			−0.9	3.6	. . . .	. . . .
	S	27	1:40	17:40	. . . .	. . . .
			−0.6	3.0	. . . .	. . . .
E	S	28	2:22	9:45	13:27	19:33
			−0.1	1.7	1.5	2.4
	M	29	2:54	9:35	15:34	21:18
			0.3	2.0	1.0	2.0
	Tu	30	3:17	10:00	16:53	22:51
			0.8	2.5	0.3	1.6

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	3:29	10:12	17:53	. . .
			1.1	3.0	−0.3	. . .
	Th	2	0:12	3:20	10:38	18:40
			1.4	1.2	3.5	−0.7
	F	3	1:37	3:13	11:10	19:26
			1.4	1.3	3.9	−1.0
	S	4	11:39	20:09	. . . .	. . . .
			4.1	−1.1	. . . .	. . . .
S	S	5	12:08	20:49	. . . .	. . . .
			4.2	−1.2	. . . .	. . . .
	M	6	12:43	21:30	. . . .	. . . .
			4.2	−1.1	. . . .	. . . .
	Tu	7	13:14	22:06	. . . .	. . . .
			4.1	−0.9	. . . .	. . . .
A	W	8	13:44	22:47	. . . .	. . . .
			3.8	−0.7	. . . .	. . . .
☾	Th	9	14:15	23:26	. . . .	. . . .
			3.5	−0.5	. . . .	. . . .
	F	10	14:50	. . . .	. . . .	. . . .
			3.1	. . . .	. . . .	. . . .
	S	11	0:05	15:30	. . . .	. . . .
			−0.3	2.7	. . . .	. . . .
	S	12	0:44	16:24	. . . .	. . . .
			0.0	2.2	. . . .	. . . .
E	M	13	1:21	8:50	14:10	18:20
			1.3	1.9	1.5	1.8
	Tu	14	1:51	9:08	15:46	20:55
			0.6	2.2	1.0	1.5
	W	15	2:12	9:21	16:50	22:40
			0.9	2.7	0.4	1.3
	Th	16	2:20	9:45	17:42	. . .
			1.1	3.1	−0.3	. . .
●	F	17	0:14	2:17	10:14	18:30
			1.3	1.2	3.7	−0.8
	S	18	10:47	19:20	. . . .	. . . .
			4.2	−1.3	. . . .	. . . .
N	S	19	11:24	20:07	. . . .	. . . .
			4.6	−1.6	. . . .	. . . .
P	M	20	12:06	20:55	. . . .	. . . .
			4.9	−1.8	. . . .	. . . .
	Tu	21	12:46	21:40	. . . .	. . . .
			4.9	−1.7	. . . .	. . . .
	W	22	13:30	22:27	. . . .	. . . .
			4.7	−1.5	. . . .	. . . .
☽	Th	23	14:15	23:10	. . . .	. . . .
			4.3	−1.1	. . . .	. . . .
	F	24	15:04	23:50	. . . .	. . . .
			3.7	−0.7	. . . .	. . . .
	S	25	16:00	. . . .	. . . .	. . . .
			3.0	. . . .	. . . .	. . . .
E	S	26	0:24	7:48	11:39	17:10
			−0.1	1.7	1.5	2.2
	M	27	0:50	8:00	14:38	19:21
			0.4	2.2	1.1	1.5
	Tu	28	1:02	8:26	16:39	21:51
			0.8	2.7	0.5	1.1
	W	29	1:32	8:57	17:38	. . .
			1.0	3.2	−0.2	. . .
	Th	30	9:29	18:22	. . . .	. . . .
			3.6	−0.7	. . . .	. . . .
○	F	31	10:00	19:00	. . . .	. . . .
			4.0	−1.0	. . . .	. . . .

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	10:40	19:33	. . . .	. . . .
			4.2	−1.3	. . . .	. . . .
S	S	2	11:15	20:05	. . . .	. . . .
			4.4	−1.3	. . . .	. . . .
	M	3	11:50	20:36	. . . .	. . . .
			4.4	−1.3	. . . .	. . . .
A	Tu	4	12:25	21:07	. . . .	. . . .
			4.3	−1.2	. . . .	. . . .
	W	5	12:57	21:35	. . . .	. . . .
			4.1	−1.0	. . . .	. . . .
	Th	6	13:27	22:00	. . . .	. . . .
			3.8	−0.8	. . . .	. . . .
	F	7	14:00	22:34	. . . .	. . . .
			3.4	−0.5	. . . .	. . . .
☾	S	8	14:30	23:00	. . . .	. . . .
			3.0	−0.2	. . . .	. . . .
E	S	9	6:40	8:50	15:00	23:22
			1.7	1.5	2.5	0.1
	M	10	6:58	11:25	15:39	23:35
			1.9	1.6	1.9	0.4
	Tu	11	7:20	14:19	16:20	23:38
			2.3	1.2	1.3	0.6
	W	12	7:48	16:30	21:00	23:24
			2.7	0.6	0.9	0.8
	Th	13	8:20	17:20	. . . .	. . . .
			3.2	−0.1	. . . .	. . . .
	F	14	9:00	18:01	. . . .	. . . .
			3.8	−0.8	. . . .	. . . .
●	S	15	9:42	18:42	. . . .	. . . .
			4.3	−1.3	. . . .	. . . .
N	S	16	10:26	19:24	. . . .	. . . .
			4.8	−1.7	. . . .	. . . .
P	M	17	11:11	20:03	. . . .	. . . .
			5.0	−1.9	. . . .	. . . .
	Tu	18	11:58	20:43	. . . .	. . . .
			5.1	−1.9	. . . .	. . . .
	W	19	12:42	21:20	. . . .	. . . .
			5.0	−1.7	. . . .	. . . .
	Th	20	13:27	21:55	. . . .	. . . .
			4.6	−1.3	. . . .	. . . .
	F	21	14:13	22:25	. . . .	. . . .
			3.9	−0.8	. . . .	. . . .
☽	S	22	5:31	7:51	14:57	22:50
E			1.4	1.3	3.2	−0.2
	S	23	5:49	10:06	15:40	23:05
			1.8	1.4	2.3	0.3
	M	24	6:16	12:39	16:30	23:00
			2.3	1.2	1.4	0.6
	Tu	25	6:51	16:56	19:34	21:30
			2.7	0.6	0.8	0.7
	W	26	7:40	17:34	. . . .	. . . .
			3.2	−0.1	. . . .	. . . .
	Th	27	8:15	18:07	. . . .	. . . .
			3.6	−0.6	. . . .	. . . .
	F	28	8:58	18:36	. . . .	. . . .
			3.9	−0.9	. . . .	. . . .
S	S	29	9:42	19:00	. . . .	. . . .
○			4.2	−1.2	. . . .	. . . .
	S	30	10:23	19:28	. . . .	. . . .
			4.3	−1.3	. . . .	. . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
JULY.							
	M	1	11:08	19:50			
			4.3	−1.3			
A	Tu	2	11:38	20:18			
			4.3	−1.2			
	W	3	12:13	20:35			
			4.2	−1.0			
	Th	4	12:45	21:00			
			3.9	−0.8			
	F	5	4:05	5:40	13:17	21:23	
			1.3	1.2	3.6	−0.6	
	S	6	4:16	6:50	13:46	21:43	
			1.4	1.3	3.3	−0.3	
E	S	7	4:34	8:00	14:15	22:00	
			1.6	1.3	2.8	0.0	
☾	M	8	5:00	9:28	14:43	22:04	
			1.8	1.3	2.2	0.3	
	Tu	9	5:30	11:38	15:06	22:00	
			2.3	1.2	1.5	0.5	
	W	10	5:58	21:48			
			2.7	0.5			
	Th	11	6:45	17:40			
			3.2	0.1			
	F	12	7:37	17:42			
			3.7	−0.6			
N	S	13	8:30	18:10			
			4.2	−1.2			
●	S	14	9:23	18:41			
			4.6	−1.6			
P	M	15	10.16	19:14			
			5.0	−1.8			
	Tu	16	11:06	19:46			
			5.0	−1.7			
	W	17	11:55	20:18			
			4.9	−1.5			
	Th	18	12:42	20:47			
			4.6	−1.1			
E	F	19	3:18	6:02	13:28	21:12	
			1.1	0.9	4.0	−0.7	
	S	20	3:35	7:26	14:13	21:32	
			1.5	0.9	3.3	−0.2	
☽	S	21	3:58	8:56	14:56	21:43	
			1.9	1.0	2.5	0.3	
	M	22	4:27	10:37	15:34	21:37	
			2.3	1.0	1.6	0.5	
	Tu	23	5:06	13:10	15:13	21:07	
			2.8	0.8	0.9	0.6	
	W	24	5:53	17:00			
			3.1	0.2			
	Th	25	6:45	17:31			
			3.5	−0.3			
S	F	26	7:43	18:00			
			3.7	−0.7			
	S	27	8:38	18:25			
			3.8	−0.9			
	S	28	9:28	18:46			
			4.0	−1.0			
○ A	M	29	10:13	18:05			
			4.1	−1.0			
	Tu	30	10:54	19:20			
			4.1	−0.9			
	W	31	11:30	19:40			
			4.0	−0.8			
AUGUST.							
	Th	1	2:15	4:16	12:05	20:00	
			1.1	1.0	3.9	−0.6	
	F	2	2:20	5:25	12:39	20:20	
			1.2	1.0	3.6	−0.4	
E	S	3	2:33	6:20	13:12	20:37	
			1.4	0.9	3.3	−0.1	
	S	4	2:50	7:18	13:43	20:50	
			1.7	0.9	2.9	0.1	
	M	5	3:09	8:21	14:12	20:54	
			2.0	0.9	2.3	0.4	
☾	Tu	6	3:32	9:44	14:40	20:50	
			2.4	0.9	1.7	0.5	
	W	7	4:06	11:46	14:58	20:43	
			2.8	0.8	1.0	0.5	
	Th	8	4:51	16:51			
			3.2	0.3			
	F	9	5:52	17:09			
			3.6	−0.3			
N	S	10	7:04	17:26			
			4.0	−0.9			
	S	11	8:12	17:53			
			4.4	−1.2			
P	M	12	9:15	18:21			
			4.6	−1.4			
●	Tu	13	10:12	18:49			
			4.7	−1.3			
	W	14	11:05	19:15			
			4.6	−1.1			
	Th	15	1:26	4:12	11:56	19:40	
			0.9	0.7	4.3	−0.7	
E	F	16	1:34	5:38	12:44	20:00	
			1.2	0.6	3.8	−0.3	
	S	17	1:58	6:48	13:31	20:18	
			1.6	0.5	3.2	0.1	
	S	18	2:17	7:59	14:17	20:28	
			2.1	0.4	2.5	0.5	
	M	19	2:46	9:12	15:08	20:26	
			2.5	0.4	1.8	0.7	
☽	Tu	20	3:20	10:41	15:55	20:09	
			2.9	0.5	1.1	0.7	
	W	21	4:02	13:11	17:31	19:28	
			3.1	0.4	0.6	0.5	
S	Th	22	4:53	16:19			
			3.3	0.0			
	F	23	5:58	17:00			
			3.4	−0.3			
	S	24	7:10	17:30			
			3.4	−0.4			
A	S	25	8:17	17:54			
			3.5	−0.5			
	M	26	9:15	18:12			
			3.6	−0.5			
	Tu	27	10:00	18:25			
			3.6	−0.4			
○	W	28	1:04	2:20	10:45	18:40	
			1.1	1.0	3.6	−0.3	
	Th	29	0:39	3:58	11:25	18:57	
			1.2	0.9	3.6	−0.2	
E	F	30	0:47	4:59	12:01	19:15	
			1.4	0.7	3.4	0.0	
	S	31	1:01	5:51	12:38	19:31	
			1.6	0.6	3.2	0.2	
SEPTEMBER.							
	S	1	1:17	6:42	13:14	19:42	
			1.9	0.4	2.8	0.5	
	M	2	1:35	7:37	13:51	19:45	
			2.2	0.3	2.3	0.6	
	Tu	3	1:58	8:40	14:30	19:44	
			2.6	0.3	1.7	0.7	
☾	W	4	2:30	10:00	15:16	19:37	
			3.0	0.3	1.1	0.7	
	Th	5	3:11	11:51	17:01	19:13	
			3.3	0.2	0.6	0.5	
N	F	6	4:05	15:00			
			3.6	−0.1			
	S	7	5:15	16:11			
			3.8	−0.5			
	S	8	6:38	16:48			
			4.0	−0.8			
	M	9	7:58	17:19			
			4.1	−0.8			
P	Tu	10	9:09	17:44			
			4.1	−0.7			
●	W	11	10:12	18:07	23:48		
			4.0	−0.4	1.1		
E	Th	12	3:46	11:07	18:28		
			0.6	3.8	−0.1		
	F	13	0:00	5:04	12:01	18:45	
			1.5	0.3	3.4	0.3	
	S	14	0:21	6:08	12:51	19:00	
			2.0	0.0	2.9	0.6	
	S	15	0:46	7:10	13:41	19:10	
			2.4	−0.1	2.4	0.8	
	M	16	1:15	8:10	14:30	19:12	
			2.9	−0.1	1.8	0.9	
	Tu	17	1:48	9:15	15:24	19:05	
			3.2	−0.1	1.3	0.9	
☽	W	18	2:24	10:29	16:31	18:50	
			3.3	0.0	0.9	0.8	
S	Th	19	3:07	12:07			
			3.4	0.1			
	F	20	3:58	14:49			
			3.3	0.1			
	S	21	5:06	15:56			
			3.2	0.0			
A	S	22	6:31	16:35			
			3.1	0.0			
	M	23	7:49	16:59			
			3.0	0.0			
	Tu	24	8:55	17:14	23:15		
			3.1	0.1	1.1		
	W	25	2:11	9:50	17:29	23:09	
			1.1	3.1	0.2	1.3	
E ○	Th	26	3:30	10:37	17:45	23:19	
			0.8	3.0	0.4	1.6	
	F	27	4:27	11:21	18:01	23:34	
			0.6	2.9	0.6	1.8	
	S	28	5:18	12:03	18:17	23:52	
			0.3	2.8	0.8	2.2	
	S	29	6:07	12:48	18:27		
			0.0	2.5	0.9		
	M	30	0:13	6:59	13:32	18:31	
			2.6	−0.2	2.1	1.0	

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	0:39	7:55	14:23	18:31
			3.0	−0.3	1.7	1.1
	W	2	1:10	8:57	15:22	18:28
			3.8	−0.3	1.2	1.0
N	Th	3	1:49	10:10	16:54	18:14
			3.6	−0.3	0.9	0.8
☾	F	4	2:35	11:39	. . . . .	
			3.8	−0.3	. . . . .	
	S	5	3:34	13:20	. . . . .	
			3.9	−0.4	. . . . .	
	S	6	4:48	14:50	. . . . .	
			3.8	−0.4	. . . . .	
	M	7	6:18	15:44	. . . . .	
			3.6	−0.3	. . . . .	
P	Tu	8	7:49	16:21	22:15	. . .
			3.5	−0.1	1.0	. . .
E	W	9	1:08	9:07	16:46	22:14
			0.9	3.3	0.2	1.3
●	Th	10	3:10	10:17	17:06	22:32
			0.5	3.1	0.6	1.8
	F	11	4:26	11:20	17:22	22:56
			0.1	2.8	0.9	2.3
	S	12	5:30	12:17	17:36	23:24
			−0.3	2.5	1.2	2.8
	S	13	6:27	13:10	17:44	23:55
			−0.5	2.1	1.3	3.2
	M	14	7:21	14:02	17:50	. . .
			−0.6	1.7	1.3	. . .
	Tu	15	0:28	8:15	14:56	17:49
			3.5	−0.6	1.4	1.2
S	W	16	1:04	9:09	15:55	17:51
			3.6	−0.5	1.1	1.0
	Th	17	1:43	10:05	. . . . .	
			3.6	−0.3	. . . . .	
☽	F	18	2:23	11:07	. . . . .	
			3.5	−0.1	. . . . .	
A	S	19	3:10	12:14	. . . . .	
			3.2	0.1	. . . . .	
	S	20	4:06	13:30	. . . . .	
			2.9	0.3	. . . . .	
	M	21	5:32	14:33	. . . . .	
			2.7	0.4	. . . . .	
	Tu	22	7:04	15:15	21:22	. . .
			2.5	0.6	1.3	. . .
	W	23	1:10	8:28	15:45	21:31
			1.2	2.4	0.7	1.5
E	Th	24	2:44	9:35	16:10	21:48
			0.9	2.4	0.9	1.8
	F	25	3:47	10:34	16:32	22:08
			0.5	2.3	1.1	2.1
○	S	26	4:41	11:27	16:48	22:30
			0.2	2.3	1.2	2.5
	S	27	5:32	12:20	17:00	22:56
			−0.2	2.1	1.4	2.9
	M	28	6:23	13:12	17:05	23:27
			−0.5	1.9	1.4	3.3
	Tu	29	7:15	14:09	17:06	. . .
			−0.3	1.6	1.4	. . .
N	W	30	0:08	8:09	15:12	17:07
			3.7	−0.9	1.3	1.2
	Th	31	0:42	9:07	. . . . .	
			4.0	−0.9	. . . . .	

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	1:26	10:07	. . . . .	
			4.1	−0.3	. . . . .	
☾	S	2	2:17	11:11	. . . . .	
			4.1	−0.6	. . . . .	
P	S	3	3:16	12:21	. . . . .	
			3.8	−0.4	. . . . .	
	M	4	4:28	13:22	. . . . .	
			3.4	0.0	. . . . .	
	Tu	5	6:01	14:16	20:20	. . .
			3.0	0.3	1.2	. . .
E	W	6	0:13	7:42	14:54	20:32
			1.0	2.6	0.7	1.6
	Th	7	2:25	9:16	15:20	21:00
			0.6	2.4	1.1	2.1
	F	8	3:48	10:43	15:38	21:31
			0.1	2.1	1.4	2.6
●	S	9	4:55	11:55	15:51	22:05
			−0.4	1.9	1.6	3.1
	S	10	5:51	13:01	15:58	22:42
			−0.7	1.7	1.6	3.5
	M	11	6:44	14:02	15:54	23:20
			−1.0	1.6	1.5	3.7
S	Tu	12	7:28	23:56	. . . . .	
			−1.0	3.9	. . . . .	
	W	13	8:12	. . . . .		
			−1.0	. . . . .		
	Th	14	0:35	8:54	. . . . .	
			3.8	−0.8	. . . . .	
	F	15	1:15	9:34	. . . . .	
			3.7	−0.5	. . . . .	
A	S	16	1:54	10:14	. . . . .	
			3.4	−0.2	. . . . .	
☽	S	17	2:34	10:57	17:46	19:51
			3.1	0.1	1.2	1.1
	M	18	3:22	11:37	18:22	21:09
			2.7	0.4	1.3	1.2
	Tu	19	4:20	12:22	18:57	23:16
			2.4	0.6	1.5	1.2
E	W	20	5:58	13:06	18:30	. . .
			2.0	0.9	1.7	. . .
	Th	21	1:26	7:52	13:45	20:00
			1.0	1.8	1.1	2.0
	F	22	2:54	9:31	14:11	20:32
			0.7	1.7	1.4	2.3
	S	23	4:00	10:56	14:35	21:02
			0.2	1.7	1.5	2.7
	S	24	4:56	12:11	14:35	21:38
			−0.3	1.7	1.6	3.2
○	M	25	5:47	22:17	. . . . .	
			−0.7	3.6	. . . . .	
	Tu	26	6:37	23:00	. . . . .	
			−1.1	4.0	. . . . .	
N	W	27	7:35	23:43	. . . . .	
			−1.3	4.3	. . . . .	
P	Th	28	8:12	. . . . .		
			−1.4	. . . . .		
	F	29	0:31	9:00	. . . . .	
			4.4	−1.3	. . . . .	
	S	30	1:20	9:47	. . . . .	
			4.3	−1.0	. . . . .	

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	2:11	10:33	17:19	19:12
			4.0	−0.6	1.1	1.0
	M	2	3:06	11:16	17:40	20:50
			3.5	−0.1	1.2	1.0
E	Tu	3	4:13	11:56	18:06	23:00
			2.9	0.4	1.5	0.9
	W	4	5:45	12:25	18:39	. . .
			2.3	0.9	1.9	. . .
	Th	5	1:15	7:49	12:42	19:16
			0.7	1.8	1.3	2.4
	F	6	3:06	10:32	12:00	19:58
			0.2	1.6	1.5	2.8
	S	7	4:27	20:43	. . . . .	
			−0.3	3.3	. . . . .	
	S	8	5:25	21:29	. . . . .	
			−0.8	3.6	. . . . .	
●	M	9	6:11	22:13	. . . . .	
			−1.0	3.8	. . . . .	
S	Tu	10	6:49	23:58	. . . . .	
			−1.2	3.9	. . . . .	
	W	11	7:25	23:40	. . . . .	
			−1.2	3.9	. . . . .	
	Th	12	8:00	. . . . .		
			−1.0	. . . . .		
	F	13	0:20	8:31	15:26	17:31
			3.8	−0.8	1.3	1.2
A	S	14	1:59	9:00	15:41	18:30
			3.6	−0.5	1.4	1.2
	S	15	1:37	9:26	16:02	19:30
			3.3	−0.2	1.5	1.1
	M	16	2:15	9:54	16:24	20:32
			2.9	0.1	1.6	1.1
☽ E	Tu	17	2:49	10:19	16:48	21:43
			2.6	0.4	1.7	1.1
	W	18	3:33	10:34	17:10	23:19
			2.1	0.7	1.9	1.0
	Th	19	4:37	10:41	17:42	. . .
			1.7	1.0	2.2	. . .
	F	20	1:17	7:23	10:35	18:18
			0.8	1.3	1.2	2.5
	S	21	3:01	18:09	. . . . .	
			0.3	2.9	. . . . .	
	S	22	4:16	20:06	. . . . .	
			−0.2	3.3	. . . . .	
	M	23	5:11	21:00	. . . . .	
			−0.7	3.7	. . . . .	
N ○	Tu	24	5:57	21:56	. . . . .	
			−1.1	4.1	. . . . .	
	W	25	6:40	22:45	. . . . .	
			−1.4	4.4	. . . . .	
P	Th	26	7:22	23:38	. . . . .	
			−1.5	4.5	. . . . .	
	F	27	8:01	. . . . .		
			−1.5	. . . . .		
	S	28	0:29	8:39	15:25	17:45
			4.4	−1.2	1.1	1.0
	S	29	1:20	9:13	15:34	19:03
			4.1	−0.8	1.3	0.9
E	M	30	2:10	9:45	15:59	20:23
			3.6	−0.3	1.5	0.8
☾	Tu	31	3:04	10:10	16:19	21:52
			2.9	0.3	1.9	0.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 1.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 120th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:49 2.0	9:15 0.3	18:00 0.5	18:47 —0.3
	Tu	2	2:33 2.3	10:05 0.1	14:02 0.4	19:34 —0.4
N	W	3	3:16 2.4	10:58 0.0	14:58 0.4	20:19 —0.4
○ P	Th	4	4:00 2.4	11:42 0.0	15:54 0.4	21:06 —0.3
	F	5	4:44 2.4	12:21 0.0	16:44 0.5	21:54 —0.2
	S	6	5:24 2.3	13:08 0.0	17:45 0.5	22:43 —0.1
	S	7	6:10 2.1	13:33 0.0	18:49 0.6	23:34 0.1
	M	8	6:47 1.8	14:15 0.0	20:08 0.7	. . . .
E	Tu	9	0:42 0.4	7:25 1.6	14:51 0.0	21:23 0.9
☾	W	10	2:04 0.6	8:01 1.3	15:26 0.0	22:41 1.2
	Th	11	4:05 0.8	8:37 1.0	16:03 —0.1	23:43 1.4
	F	12	6:17 0.7	9:23 0.8	16:39 —0.1	. . . . .
	S	13	0:32 1.6	8:04 0.5	10:57 0.6	17:16 —0.1
	S	14	1:13 1.7	9:00 0.4	11:56 0.5	18:00 —0.1
	M	15	1:54 1.9	9:32 0.3	13:04 0.5	18:42 —0.1
	Tu	16	2:30 2.0	10:05 0.2	14:00 0.5	19:25 —0.1
S A	W	17	3:04 2.0	10:34 0.2	14:40 0.5	20:05 —0.2
	Th	18	3:41 2.1	11:04 0.1	15:22 0.5	20:44 —0.2
●	F	19	4:11 2.1	11:35 0.1	15:56 0.6	21:23 —0.1
	S	20	4:43 2.0	12:05 0.1	16:35 0.6	21:58 —0.1
	S	21	5:15 1.9	12:30 0.1	17:19 0.7	22:35 0.0
	M	22	5:43 1.8	12:55 0.1	18:10 0.7	23:17 0.2
	Tu	23	6:09 1.7	13:24 0.1	19:05 0.8	. . . . .
E	W	24	0:06 0.4	6:36 1.5	13:50 0.0	20:07 1.0
	Th	25	1:11 0.5	7:06 1.2	14:18 0.0	21:22 1.2
☽	F	26	2:55 0.7	7:45 1.0	14:55 0.0	22:34 1.4
	S	27	5:15 0.7	8:31 0.8	15:38 —0.1	23:36 1.6
	S	28	7:27 0.4	10:00 0.5	16:31 —0.1	. . . . .
	M	29	0:35 1.9	8:31 0.3	11:46 0.4	17:29 —0.2
	Tu	30	1:28 2.1	9:12 0.2	13:02 0.4	18:26 —0.2
N	W	31	2:18 2.3	9:54 0.0	14:04 0.4	19:25 —0.3

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	Th	1	3:01 2.4	10:28 0.0	14:58 0.5	20:20 —0.3
○	F	2	3:45 2.4	11:05 —0.1	15:50 0.6	21:11 —0.3
	S	3	4:24 2.3	11:35 —0.1	16:36 0.7	22:01 —0.2
	S	4	5:02 2.1	12:05 —0.1	17:24 0.9	22:52 0.0
	M	5	5:40 1.9	12:35 —0.1	18:24 1.0	23:46 0.2
E	Tu	6	6:10 1.6	13:04 —0.1	19:23 1.1	. . . . .
	W	7	0:45 0.4	6:41 1.3	13:35 0.0	20:25 1.2
	Th	8	2:08 0.6	7:05 1.0	14:12 0.0	21:37 1.3
☾	F	9	4:09 0.7	7:26 0.8	14:44 0.0	22:46 1.4
	S	10	15:29 0.1	23:50 1.6	. . . . .	. . . . .
	S	11	16:25 0.1	. . . . .	. . . . .	. . . . .
	M	12	0:43 1.7	8:55 0.3	12:04 0.4	17:29 0.1
S	Tu	13	1:29 1.8	9:15 0.3	13:13 0.5	18:24 0.0
A	W	14	2:06 1.9	9:37 0.2	14:00 0.5	19:14 0.0
	Th	15	2:44 1.9	10:00 0.2	14:34 0.6	20:00 —0.1
	F	16	3:15 2.0	10:25 0.1	15:07 0.7	20:41 —0.1
●	S	17	3:45 1.9	10:45 0.1	15:46 0.8	21:18 0.0
	S	18	4:13 1.9	11:07 0.1	16:23 0.9	21:56 0.0
	M	19	4:40 1.8	11:31 0.0	17:02 1.0	22:38 0.1
E	Tu	20	5:04 1.6	11:52 0.0	17:45 1.1	23:22 0.2
	W	21	5:33 1.4	12:14 0.0	18:33 1.2	. . . . .
	Th	22	0:16 0.4	6:00 1.2	12:35 0.0	19:25 1.3
	F	23	1:29 0.5	6:27 1.0	13:03 0.0	20:34 1.4
	S	24	3:16 0.6	7:00 0.7	13:44 0.0	21:45 1.6
☽	S	25	5:51 0.5	8:00 0.6	14:38 0.0	23:02 1.7
	M	26	7:36 0.4	10:05 0.5	15:52 0.0	23:58 1.9
N	Tu	27	8:14 0.2	12:00 0.4	17:06 0.0	. . . . .
	W	28	1:04 2.1	8:46 0.1	13:12 0.5	18:25 —0.1
P	Th	29	1:55 2.2	9:17 0.0	14:06 0.6	19:26 —0.2

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	2:39 2.2	9:45 —0.1	14:56 0.8	20:24 —0.2
	S	2	3:22 2.1	10:15 —0.1	15:40 1.0	21:15 —0.1
○	S	3	3:55 1.9	10:42 —0.1	16:25 1.1	22:09 0.0
E	M	4	4:31 1.7	11:06 —0.1	17:09 1.3	23:00 0.1
	Tu	5	5:02 1.4	11:34 —0.1	17:55 1.4	23:58 0.3
	W	6	5:30 1.2	12:00 —0.1	18:41 1.5	. . . . .
	Th	7	0:55 0.4	6:00 1.0	12:22 0.0	19:31 1.5
	F	8	2:18 0.5	6:25 0.7	12:45 0.0	20:29 1.5
	S	9	4:15 0.5	6:45 0.6	13:19 0.1	21:44 1.5
☾	S	10	14:15 0.2	22:54 1.5	. . . . .	. . . . .
S	M	11	8:02 0.4	10:47 0.5	15:30 0.2	. . . . .
A	Tu	12	0:00 1.6	8:13 0.3	12:21 0.4	17:00 0.2
	W	13	0:55 1.7	8:30 0.2	13:05 0.5	18:15 0.2
	Th	14	1:35 1.7	8:49 0.2	13:48 0.7	19:05 0.1
	F	15	2:12 1.7	9:09 0.1	14:23 0.8	19:55 0.1
	S	16	2:41 1.7	9:30 0.1	14:55 1.0	20:35 0.1
	S	17	3:10 1.7	9:48 0.0	15:37 1.1	21:15 0.1
● E	M	18	3:36 1.4	10:08 0.0	16:05 1.3	22:00 0.1
	Tu	19	4:04 1.4	10:28 —0.1	16:42 1.4	22:45 0.2
	W	20	4:31 1.3	10:48 —0.1	17:21 1.5	23:37 0.3
	Th	21	4:59 1.1	11:10 —0.1	18:04 1.6	. . . . .
	F	22	0:39 0.4	5:31 0.9	11:35 —0.1	18:56 1.7
	S	23	2:00 0.4	6:05 0.7	12:07 —0.1	19:56 1.7
	S	24	3:58 0.4	6:45 0.5	12:46 0.0	21:10 1.7
N ☽	M	25	5:56 0.3	8:15 0.4	13:50 0.1	22:29 1.8
	Tu	26	6:57 0.2	10:52 0.3	15:25 0.1	23:36 1.9
	W	27	7:31 0.1	12:18 0.5	17:00 0.1	. . . . .
P	Th	28	0:33 1.9	8:00 0.0	13:14 0.7	18:23 0.1
	F	29	1:23 1.9	8:28 —0.1	14:03 0.9	19:30 0.1
	S	30	2:06 1.8	8:53 —0.1	14:45 1.2	20:28 0.0
E	S	31	2:45 1.7	9:19 —0.2	15:25 1.4	21:22 0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.7 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Hawaiian Standard, 157° 30′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	M	1	3:20 1.5	9:44 −0.2	16:05 1.6	22:15 0.1
	Tu	2	3:54 1.3	10:06 −0.2	16:44 1.7	23:09 0.2
	W	3	4:25 1.1	10:32 −0.2	17:23 1.7	. . . . .
	Th	4	0:05 0.3	4:57 0.9	10:54 −0.1	18:03 1.7
	F	5	1:05 0.3	5:29 0.7	11:16 0.0	18:48 1.7
	S	6	2:23 0.4	6:05 0.5	11:41 0.1	19:38 1.6
S	S	7	4:09 0.4	6:44 0.5	12:09 0.1	20:41 1.6
	M	8	5:57 0.3	8:16 0.5	13:00 0.2	21:57 1.5
☾ A	Tu	9	6:45 0.3	11:00 0.4	14:32 0.3	23:05 1.5
	W	10	7:09 0.2	12:12 0.5	16:25 0.4	. . . . .
	Th	11	0:00 1.5	7:30 0.2	12:54 0.7	17:45 0.3
	F	12	0:42 1.5	7:49 0.1	13:27 0.9	18:51 0.3
	S	13	1:19 1.5	8:09 0.1	14:04 1.1	19:43 0.3
	S	14	1:52 1.4	8:28 0.0	14:38 1.3	20:33 0.2
E	M	15	2:24 1.3	8:48 −0.1	15:12 1.5	21:22 0.2
	Tu	16	2:55 1.2	9:07 −0.1	15:46 1.6	22:10 0.2
●	W	17	3:28 1.0	9:29 −0.2	16:23 1.8	23:04 0.2
	Th	18	4:01 0.9	9:53 −0.2	17:01 1.9	. . . . .
	F	19	0:02 0.2	4:34 0.7	10:20 −0.2	17:47 2.0
	S	20	1:11 0.3	5:11 0.5	10:50 −0.2	18:40 2.0
N	S	21	2:33 0.3	6:02 0.4	11:28 −0.1	19:36 1.9
P	M	22	4:10 0.2	7:17 0.3	12:12 0.0	20:44 1.9
☽	Tu	23	5:21 0.2	9:29 0.3	13:28 0.2	21:53 1.8
	W	24	6:05 0.1	11:14 0.5	15:16 0.3	22:57 1.8
	Th	25	6:37 0.0	12:21 0.7	17:01 0.3	23:58 1.7
	F	26	7:06 −0.1	13:10 1.0	18:25 0.3	. . . . .
	S	27	0:41 1.6	7:33 −0.1	13:51 1.3	19:36 0.3
E	S	28	1:24 1.4	7:59 −0.2	14:32 1.5	20:36 0.3
	M	29	2:05 1.2	8:23 −0.2	15:08 1.7	21:33 0.2
○	Tu	30	2:41 1.1	8:48 −0.2	15:44 1.9	22:28 0.2

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	W	1	3:19 0.9	9:13 −0.2	16:20 2.0	23:19 0.2
	Th	2	3:54 0.7	9:38 −0.2	16:56 2.0	. . . . .
	F	3	0:14 0.2	4:31 0.6	10:03 −0.1	17:34 1.9
	S	4	1:11 0.2	5:09 0.5	10:30 0.0	18:17 1.9
S	S	5	2:18 0.2	5:56 0.4	10:57 0.1	19:03 1.8
	M	6	3:32 0.2	6:59 0.3	11:34 0.2	19:55 1.7
A	Tu	7	4:39 0.2	8:41 0.4	12:23 0.3	20:55 1.6
☾	W	8	5:20 0.2	10:33 0.5	13:46 0.4	21:55 1.5
	Th	9	5:53 0.2	11:45 0.6	15:34 0.5	22:46 1.4
	F	10	6:18 0.1	12:26 0.8	17:14 0.5	23:33 1.3
	S	11	6:42 0.0	13:08 1.1	18:32 0.5	. . . . .
E	S	12	0:15 1.2	7:02 0.0	13:40 1.3	19:40 0.4
	M	13	0:55 1.1	7:24 −0.1	14:14 1.6	20:35 0.4
	Tu	14	1:37 1.0	7:49 −0.2	14:49 1.8	21:32 0.3
	W	15	2:15 0.8	8:14 −0.2	15:26 2.0	22:29 0.2
●	Th	16	2:54 0.7	8:41 −0.3	16:05 2.1	23:23 0.2
	F	17	3:36 0.6	9:12 −0.3	16:48 2.2	. . . . .
	S	18	0:24 0.1	4:22 0.4	9:46 −0.2	17:35 2.2
N P	S	19	1:30 0.1	5:16 0.3	10:25 −0.2	18:25 2.2
	M	20	2:35 0.1	6:25 0.3	11:12 −0.1	19:19 2.1
	Tu	21	3:36 0.1	7:56 0.3	12:06 0.1	20:16 1.9
	W	22	4:25 0.0	9:45 0.4	13:27 0.3	21:15 1.8
☽	Th	23	5:04 0.0	11:10 0.7	15:15 0.5	22:11 1.6
	F	24	5:38 −0.1	12:10 1.0	17:00 0.6	23:01 1.4
E	S	25	6:08 −0.1	12:55 1.3	18:35 0.5	23:52 1.2
	S	26	6:35 −0.2	13:36 1.5	19:49 0.5	. . . . .
	M	27	0:38 1.0	7:05 −0.2	14:13 1.8	20:52 0.4
	Tu	28	1:22 0.8	7:32 −0.3	14:48 1.9	21:48 0.3
	W	29	2:05 0.7	8:00 −0.3	15:23 2.0	22:37 0.2
○	Th	30	2:50 0.6	8:29 −0.2	15:59 2.1	23:26 0.2
	F	31	3:31 0.5	9:00 −0.2	16:35 2.1	. . . . .

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	0:18 0.2	4:17 0.4	9:30 −0.1	17:13 2.0
	S	2	1:01 0.2	4:59 0.4	10:05 0.0	17:53 2.0
	M	3	1:51 0.2	5:50 0.4	10:39 0.1	18:34 1.9
A	Tu	4	2:42 0.2	6:52 0.4	11:18 0.2	19:16 1.8
	W	5	3:24 0.1	8:08 0.4	12:04 0.3	20:03 1.6
	Th	6	4:02 0.1	9:41 0.6	13:13 0.5	20:45 1.5
☾	F	7	4:32 0.1	10:54 0.7	14:56 0.6	21:30 1.3
	S	8	5:00 0.0	11:46 1.0	16:46 0.7	22:17 1.2
E	S	9	5:26 0.0	12:30 1.3	18:21 0.6	23:06 1.0
	M	10	5:54 −0.1	13:11 1.5	19:41 0.5	23:56 0.8
	Tu	11	6:24 −0.2	13:50 1.8	20:47 0.4	. . . . .
	W	12	0:48 0.7	6:56 −0.2	14:28 2.0	21:45 0.3
	Th	13	1:41 0.6	7:32 −0.3	15:10 2.2	22:39 0.2
●	F	14	2:38 0.5	8:10 −0.3	15:52 2.3	23:32 0.1
N	S	15	3:35 0.4	8:49 −0.3	16:37 2.4	. . . . .
P	S	16	0:26 0.0	4:24 0.4	9:34 −0.3	17:24 2.3
	M	17	1:15 0.0	5:26 0.3	10:21 −0.2	18:12 2.2
	Tu	18	2:02 0.0	6:35 0.4	11:13 0.0	18:57 2.1
	W	19	2:44 0.0	7:54 0.5	12:12 0.2	19:43 1.8
	Th	20	3:24 0.0	9:24 0.7	13:31 0.4	20:30 1.6
☽ E	F	21	4:00 −0.1	10:41 0.9	15:19 0.6	21:17 1.3
	S	22	4:34 −0.1	11:42 1.2	17:13 0.7	22:05 1.1
	S	23	5:08 −0.2	12:33 1.5	18:55 0.6	22:55 0.8
	M	24	5:41 −0.2	13:15 1.7	20:15 0.5	23:53 0.7
	Tu	25	6:14 −0.2	13:54 1.9	21:12 0.4	. . . . .
	W	26	0:50 0.6	6:51 −0.2	14:31 2.0	21:59 0.3
	Th	27	1:45 0.5	7:25 −0.2	15:06 2.1	22:39 0.2
S	F	28	2:37 0.5	8:02 0.2	15:41 2.1	23:15 0.1
○	S	29	3:22 0.5	8:40 0.2	16:18 2.1	23:53 0.1
	S	30	4:02 0.5	9:16 −0.1	16:53 2.1	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.7 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Hawaiian Standard, 157° 30′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
A	M	1	0:32	4:44	9:53	17:29			Th	1	0:32	5:55	11:12	17:53			S	1	0:10	7:00	13:13	18:05	
			0.1	0.5	0.0	2.0					0.1	0.8	0.2	1.6					0.0	1.4	0.6	0.9	
	Tu	2	1:07	5:30	10:30	18:05		E	F	2	0:55	6:47	11:57	18:24			M	2	0:34	7:57	14:53	18:37	
			0.1	0.5	0.0	1.9					0.1	0.9	0.4	1.4					0.0	1.5	0.6	0.7	
	W	3	1:40	6:25	11:12	18:37			S	3	1.20	7:43	13:00	18:50			Tu	3	1:10	9:10	17:11	19:20	
			0.1	0.5	0.2	1.7					0.0	1.0	0.5	1.2					0.0	1.6	0.5	0.6	
	Th	4	2:12	7:25	12:00	19:06			S	4	1:47	8:48	14:28	19:20		☾	W	4	1:58	10:25	18:55	21:50	
			0.1	0.6	0.3	1.6					0.0	1.2	0.7	1.0					0.0	1.7	0.3	0.4	
	F	5	2:48	8:38	13:02	19:40		☾	M	5	2:23	10:00	16:40	20:00		N	Th	5	3:08	11:35	19:43	23:28	
			0.1	0.7	0.5	1.4					0.0	1.4	0.7	0.8					0.0	1.8	0.2	0.4	
E	S	6	3:12	9:50	14:32	20:17			Tu	6	3:05	11:05	18:50	21:10			F	6	4:34	12:33	20:15	. . .	
			0.0	0.9	0.7	1.2					0.0	1.6	0.6	0.7					0.0	2.0	0.1	. . .	
☾	S	7	3:40	10:53	16:32	21:00			W	7	3:55	12:05	20:05	23:02			S	7	0:43	5:54	13:24	20:45	
			0.0	1.2	0.7	1.0					—0.1	1.8	0.4	0.4					0.5	—0.1	2.1	0.0	
	M	8	4:15	11:48	18:25	22:04			Th	8	4:55	13:00	20:48	. . .			S	8	1:40	6:55	14:13	21:15	
			—0.1	1.4	0.7	0.8					—0.1	2.0	0.2	. . .					0.7	—0.1	2.1	0.0	
	Tu	9	4:50	12:36	19:56	23:13		N	F	9	0:30	5:55	13:15	21:26		P	M	9	2:30	8:00	14:58	21:44	
			—0.1	1.7	0.5	0.6					0.4	—0.2	2.2	0.1					0.8	—0.1	2.1	—0.1	
	W	10	5:32	13:24	21:00	. . .			S	10	1:35	6:56	14:46	22:00		●	Tu	10	3:14	8:53	15:32	22:12	
			—0.2	2.0	0.3	. . .					0.5	—0.3	2.3	0.0					1.0	—0.1	1.9	—0.1	
	Th	11	0:24	6:18	14:10	21:47		P	S	11	2:32	7:57	15:20	22:35		E	W	11	4:00	9:47	16:07	22:38	
			0.5	—0.3	2.2	0.2					0.5	—0.3	2.3	0.0					1.2	0.0	1.7	—0.2	
N	F	12	1:30	7:05	14:58	22:38		●	M	12	3:26	8:47	16:00	23:07			Th	12	4:44	10:43	16:40	23:03	
			0.6	—0.3	2.3	0.1					0.7	—0.3	2.3	—0.1					1.4	0.1	1.4	—0.1	
	S	13	2:30	7:56	15:40	23:15			Tu	13	4:12	9:40	16:40	23:40			F	13	5:30	11:43	17:13	23:28	
			0.4	—0.3	2.4	0.0					0.8	—0.2	2.1	—0.1					1.5	0.3	1.2	—0.1	
●	S	14	3:25	8:46	16:23	23:55			W	14	5:04	10:35	17:17	. . .			S	14	6:20	12:48	17:43	23:54	
P			0.4	—0.3	2.4	0.0					0.9	0.0	1.9	. . .					1.6	0.4	0.9	—0.1	
	M	15	4:22	9:35	17:05	. . .		E	Th	15	0:09	5:58	11:30	17:50			S	15	7:12	14:10	18:11	. . .	
			0.5	—0.3	2.3	. . .					—0.1	1.1	0.2	1.6					1.6	0.5	0.7	. . .	
	Tu	16	0:34	5:18	10:27	17:47			F	16	0:38	6:55	12:35	18:23			M	16	0:22	8:07	16:06	18:45	
			0.0	0.6	—0.1	2.1					—0.1	1.2	0.4	1.3					0.0	1.6	0.6	0.5	
	W	17	1:10	6:22	11:24	18:27			S	17	1:05	7:55	13:55	18:54		☽	Tu	17	0:54	9:16	18:35	20:07	
			0.0	0.7	0.1	1.9					—0.1	1.3	0.6	1.0					0.1	1.6	0.5	0.4	
E	Th	18	1:44	7:27	12:23	19:06			S	18	1:37	9:08	15:54	19:19		S	W	18	1:40	10:28	19:15	23:02	
			—0.1	0.8	0.3	1.6					0.0	1.4	0.6	0.8					0.2	1.6	0.3	0.4	
	F	19	2:18	8:43	13:43	19:43		☽	M	19	2:14	10:13	18:25	19:50			Th	19	3:08	11:33	19:36	. . .	
			—0.1	1.0	0.5	1.3					0.0	1.5	0.6	0.7					0.3	1.6	0.2	. . .	
☽	S	20	2:58	9:58	15:34	20:17			Tu	20	2:55	11:20	19:54	22:15			F	20	0:18	4:41	12:28	20:00	
			—0.1	1.2	0.7	1.0					0.1	1.6	0.4	0.5					0.4	0.3	1.6	0.2	
	S	21	3:30	11:04	17:37	21:03			W	21	4:00	12:16	20:28	. . .		A	S	21	1:00	5:55	13:10	20:22	
			—0.1	1.4	0.7	0.8					0.1	1.7	0.3	. . .					0.6	0.2	1.7	0.2	
	M	22	4:08	12:00	19:35	22:13		S	Th	22	0:03	5:05	13:04	20:46			S	22	1:35	6:53	13:48	20:42	
			—0.1	1.6	0.6	0.7					0.4	0.1	1.8	0.3					0.7	0.2	1.7	0.1	
	Tu	23	4:52	12:48	20:39	23:33			F	23	1:00	6:06	13:46	21:10			M	23	2:09	7:41	14:20	21:02	
			—0.1	1.8	0.4	0.5					0.5	0.1	1.8	0.2					0.9	0.1	1.7	0.1	
	W	24	5:35	13:30	21:14	. . .		A	S	24	1:44	7:03	14:24	21:33			Tu	24	2:43	8:24	14:48	21:22	
			—0.1	1.9	0.3	. . .					0.6	0.0	1.9	0.1					1.1	0.1	1.6	0.0	
S	Th	25	0:48	6:23	14:12	21:45			S	25	2:22	7:46	14:56	21:57		E	W	25	3:15	9:07	15:15	21:40	
			0.5	—0.1	2.0	0.2					0.7	0.0	1.9	0.1					1.2	0.1	1.5	0.0	
	F	26	1:43	7:06	14:46	22:16			M	26	3:00	8:28	15:28	22:22		○	Th	26	3:50	9:48	15:45	22:00	
			0.5	—0.1	2.0	0.2					0.8	0.0	1.9	0.1					1.3	0.2	1.3	—0.1	
	S	27	2:30	7:52	15:28	22:45		○	Tu	27	3:34	9:08	15:54	22:43			F	27	4:24	10:34	16:08	22:20	
			0.5	—0.1	2.0	0.1					0.9	0.0	1.8	0.1					1.5	0.2	1.2	—0.1	
○	S	28	3:12	8:30	15:56	23:14			W	28	4:10	9:48	16:23	23:07			S	28	5:00	11:24	16:35	22:41	
A			0.6	—0.1	2.0	0.1					1.0	0.1	1.7	0.0					1.6	0.3	1.0	—0.1	
	M	29	3:55	9:10	16:30	23:40		E	Th	29	4:46	10:28	16:46	23:23			S	29	5:40	12:24	17:02	23:05	
			0.6	—0.1	2.0	0.1					1.1	0.2	1.5	0.0					1.7	0.4	0.8	—0.1	
	Tu	30	4:28	9:48	17:00	. . .			F	30	5:28	11:13	17:12	23:44			M	30	6:27	13:40	17:34	23:34	
			0.7	0.0	1.9	. . .					1.2	0.3	1.3	0.0					1.7	0.4	0.6	—0.1	
	W	31	0:10	5:10	10:28	17:27			S	31	6:10	12:05	17:38	. . .									
			0.1	0.7	0.1	1.8					1.3	0.4	1.1	. . .									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.7 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Hawaiian Standard, 157° 30′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	7:28	15:25	18:15	. . .
			1.7	0.4	0.5	. . .
N	W	2	0:10	8:34	17:22	19:40
			0.0	1.7	0.3	0.4
☾	Th	3	1:07	9:50	18:24	22:24
			0.1	1.8	0.2	0.3
	F	4	2:35	11:00	19:00	23:54
			0.2	1.8	0.1	0.5
	S	5	4:24	12:00	19:30	. . .
			0.2	1.9	0.0	. . .
	S	6	0:50	5:50	12:50	19:57
			0.7	0.1	1.9	−0.1
P	M	7	1:38	7:05	13:37	20:25
			1.0	0.1	1.8	−0.2
	Tu	8	2:21	8:04	14:17	20:50
			1.2	0.1	1.7	−0.2
E	W	9	3:03	9:03	14:54	21:15
			1.5	0.1	1.5	−0.2
●	Th	10	3:42	10:00	15:30	21:40
			1.7	0.1	1.2	−0.2
	F	11	4:24	10:54	16:05	22:05
			1.8	0.2	1.0	−0.2
	S	12	5:04	11:54	16:38	22:30
			1.9	0.2	0.8	−0.2
	S	13	5:45	13:00	17:12	22:52
			1.9	0.3	0.6	−0.1
	M	14	6:30	14:15	17:48	23:17
			1.8	0.3	0.5	0.0
S	Tu	15	7:20	15:53	18:45	23:50
			1.7	0.3	0.4	0.2
	W	16	8:21	17:28	21:03	. . .
			1.6	0.3	0.4	. . .
☽	Th	17	0:34	9:33	18:12	23:17
			0.3	1.6	0.2	0.4
	F	18	2:15	10:38	18:43	. . .
			0.4	1.6	0.2	. . .
A	S	19	0:13	4:05	11:33	19:06
			0.6	0.4	1.5	0.1
	S	20	0:48	5:35	12:18	19:24
			0.7	0.4	1.5	0.1
	M	21	1:20	6:40	12:56	19:43
			0.9	0.4	1.4	0.0
	Tu	22	1:53	7:33	13:30	20:03
			1.1	0.3	1.4	0.0
E	W	23	2:25	8:24	14:02	20:22
			1.4	0.3	1.3	−0.1
	Th	24	2:55	9:12	14:32	20:43
			1.5	0.3	1.1	−0.2
○	F	25	3:26	10:00	15:00	21:02
			1.7	0.3	1.0	−0.2
	S	26	4:05	10:50	15:33	21:25
			1.8	0.2	0.8	−0.2
	S	27	4:40	11:44	16:06	21:51
			2.0	0.3	0.7	−0.2
	M	28	5:22	12:47	16:41	22:19
			2.0	0.3	0.5	−0.2
	Tu	29	6:10	14:05	17:24	22:54
			2.0	0.3	0.4	−0.1
N	W	30	7:05	15:38	18:35	23:34
			2.0	0.2	0.3	0.0
	Th	31	8:08	16:48	20:43	. . .
			1.9	0.2	0.3	. . .

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	F	1	0:38	9:14	17:33	22:45
			0.1	1.8	0.1	0.4
	S	2	2:25	10:20	18:09	23:55
			0.3	1.8	0.0	0.7
P	S	3	4:21	11:20	18:35	. . .
			0.4	1.7	−0.1	. . .
	M	4	0:45	5:54	12:10	19:05
			1.0	0.4	1.5	−0.2
E	Tu	5	1:30	7:11	12:55	19:35
			1.3	0.3	1.4	−0.2
	W	6	2:12	8:19	13:39	19:56
			1.6	0.3	1.2	−0.3
	Th	7	2:47	9:20	14:18	20:24
			1.8	0.2	1.0	−0.3
●	F	8	3:25	10:15	14:55	20:51
			2.0	0.2	0.8	−0.3
	S	9	4:02	11:06	15:38	21:18
			2.1	0.2	0.7	−0.2
	S	10	4:40	12:04	16:14	21:45
			2.1	0.2	0.5	−0.2
	M	11	5:20	13:00	16:56	22:13
			2.0	0.2	0.4	−0.1
S	Tu	12	6:00	14:05	17:48	22:42
			2.0	0.2	0.4	0.0
	W	13	6:46	15:09	18:55	23:15
			1.8	0.2	0.3	0.1
	Th	14	7:32	16:14	20:43	23:55
			1.7	0.2	0.4	0.3
	F	15	8:30	16:58	22:34	. . .
			1.6	0.2	0.5	. . .
A ☽	S	16	1:05	9:27	17:28	23:45
			0.4	1.5	0.1	0.6
	S	17	3:16	10:23	17:55	. . .
			0.6	1.4	0.1	. . .
	M	18	0:24	5:00	11:07	18:19
			0.9	0.6	1.3	0.0
E	Tu	19	0:55	6:25	11:56	18:43
			1.1	0.6	1.2	0.0
	W	20	1:29	7:32	12:40	19:08
			1.4	0.5	1.1	−0.1
	Th	21	2:05	8:30	13:11	19:25
			1.6	0.4	0.9	−0.2
	F	22	2:35	9:24	13:54	19:52
			1.8	0.3	0.8	−0.2
	S	23	3:10	10:15	14:30	20:21
			2.0	0.2	0.7	−0.3
○	S	24	3:50	11:06	15:14	20:51
			2.1	0.2	0.5	−0.3
	M	25	4:26	12:04	15:55	21:22
			2.2	0.2	0.4	−0.3
N	Tu	26	5:10	13:00	16:43	22:00
			2.2	0.1	0.4	−0.2
	W	27	6:00	14:05	17:45	22:42
			2.2	0.1	0.3	−0.1
P	Th	28	6:49	15:04	19:06	23:37
			2.1	0.1	0.3	0.0
	F	29	7:45	15:53	20:54	. . .
			2.0	0.0	0.4	. . .
	S	30	0:39	8:35	16:33	20:32
			0.2	1.8	0.0	0.6

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	2:18	9:34	17:06	23:45
			0.5	1.6	−0.1	0.9
E	M	2	4:19	10:32	17:39	. . .
			0.6	1.4	−0.1	. . .
	Tu	3	0:32	6:04	11:25	18:08
			1.3	0.6	1.2	−0.2
	W	4	1:16	7:35	12:12	18:41
			1.6	0.5	1.0	−0.3
	Th	5	1:56	8:38	13:00	19:10
			1.8	0.4	0.8	−0.3
	F	6	2:32	9:34	13:53	19:40
			2.0	0.3	0.7	−0.3
	S	7	3:10	10:25	14:38	20:13
			2.1	0.2	0.6	−0.3
●	S	8	3:45	11:15	15:27	20:45
			2.2	0.1	0.5	−0.2
S	M	9	4:23	11:55	16:05	21:18
			2.2	0.1	0.5	−0.2
	Tu	10	5:00	12:42	16:48	21:54
			2.1	0.1	0.4	−0.1
	W	11	5:35	13:27	17:40	22:30
			2.0	0.1	0.4	0.0
	Th	12	6:15	14:14	18:33	23:06
			1.9	0.1	0.4	0.1
A	F	13	6:54	14:55	19:43	23:53
			1.8	0.1	0.5	0.3
	S	14	7:36	15:35	21:13	. . .
			1.6	0.1	0.6	. . .
	S	15	0:49	8:15	16:07	22:35
			0.5	1.5	0.1	0.8
☽ E	M	16	2:26	9:00	16:35	23:35
			0.6	1.3	0.1	1.0
	Tu	17	4:27	9:45	17:04	. . .
			0.7	1.1	0.0	. . .
	W	18	0:23	6:14	10:34	17:34
			1.3	0.7	0.9	−0.1
	Th	19	1:01	7:44	11:35	18:04
			1.5	0.6	0.8	−0.1
	F	20	1:37	8:45	12:26	18:35
			1.8	0.4	0.6	−0.2
	S	21	2:16	9:34	13:28	19:15
			2.0	0.3	0.5	−0.3
	S	22	2:54	10:25	14:18	19:53
			2.2	0.2	0.5	−0.3
N ○	M	23	3:34	11:15	15:05	20:31
			2.3	0.1	0.4	−0.3
	Tu	24	4:16	12:00	15:55	21:12
			2.4	0.1	0.4	−0.3
P	W	25	5:00	12:43	16:52	21:57
			2.3	0.0	0.4	−0.2
	Th	26	5:45	13:27	17:55	22:45
			2.3	0.0	0.4	−0.1
	F	27	6:25	14:09	19:06	23:41
			2.1	0.0	0.5	0.1
	S	28	7:08	14:47	20:31	. . .
			1.9	0.0	0.7	. . .
E	S	29	0:56	7:54	15:30	21:55
			0.4	1.6	−0.1	0.9
☾	M	30	2:28	8:41	16:00	23:08
			0.6	1.3	−0.1	1.2
	Tu	31	4:34	9:29	16:36	. . .
			0.7	1.1	−0.1	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water, which is the datum of soundings on the Coast and Geodetic Survey Charts for this region, and which is 0.7 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Hawaiian Standard, 157° 30′ W., 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.								FEBRUARY.								MARCH.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	3:47 2.8	9:52 0.3	16:05 3.3	22:30 0.0		P	Th	1	5:22 3.2	11:26 —0.1	17:38 3.6	23:59 —0.3			F	1	5:07 3.3	11:12 —0.2	17:22 3.6	23:40 —0.3
	Tu	2	4:41 3.0	10:45 0.1	16:57 3.4	23:22 —0.1		○	F	2	6:10 3.3	12:15 —0.2	18:27 3.6	. . . . .		○	S	2	5:50 3.4	11:58 —0.3	18:09 3.6	. . . . .
N	W	3	5:38 3.1	11:36 0.0	17:50 3.5	. . . . .			S	3	0:45 —0.3	6:57 3.4	13:04 —0.2	19:15 3.6			S	3	0:23 —0.4	6:33 3.5	12:43 —0.3	18:55 3.6
○ P	Th	4	0:12 —0.2	6:28 3.2	12:27 —0.1	18:41 3.6			S	4	1:31 —0.3	7:44 3.4	13:52 —0.2	20:02 3.5		E	M	4	1:08 —0.3	7:17 3.5	13:28 —0.3	19:40 3.5
	F	5	1:08 —0.3	7:15 3.2	13:19 —0.1	19:32 3.6			M	5	2:17 —0.2	8:30 3.3	14:40 —0.1	20:52 3.3			Tu	5	1:50 —0.2	8:00 3.4	14:18 —0.1	20:24 3.3
	S	6	1:58 —0.2	8:05 3.2	14:10 0.0	20:25 3.5		E	Tu	6	3:06 —0.1	9:17 3.2	15:31 0.1	21:42 3.1			W	6	2:34 0.0	8:45 3.2	14:57 0.1	21:09 3.0
	S	7	2:45 —0.1	8:58 3.2	15:05 0.1	21:18 3.3			W	7	3:46 0.1	10:09 3.0	16:21 0.3	22:35 2.9			Th	7	3:20 0.2	9:30 3.0	15:45 0.3	21:58 2.7
	M	8	3:37 0.0	9:50 3.1	16:02 0.2	22:15 3.1			Th	8	4:47 0.4	11:01 2.8	17:20 0.5	23:35 2.6			F	8	4:06 0.5	10:22 2.8	16:40 0.6	22:55 2.5
E	Tu	9	4:30 0.1	10:45 3.0	16:57 0.3	23:12 2.9		☾	F	9	5:47 0.6	12:02 2.7	18:25 0.7	. . . . .			S	9	5:05 0.7	11:20 2.6	17:45 0.8	. . . . .
☾	W	10	5:25 0.3	11:43 2.9	18:00 0.4	. . . . .			S	10	0:43 2.4	6:50 0.7	13:07 2.6	19:35 0.7		☾	S	10	0:02 2.3	6:12 0.9	12:27 2.5	18:56 0.9
	Th	11	0:13 2.8	6:26 0.4	12:43 2.8	19:05 0.5			S	11	1:53 2.4	7:55 0.7	14:09 2.6	20:38 0.7		S	M	11	1:18 2.2	7:23 0.9	13:34 2.4	20:03 0.8
	F	12	1:19 2.7	7:27 0.5	13:42 2.8	20:06 0.5			M	12	2:57 2.4	8:54 0.7	15:05 2.7	21:31 0.6		A	Tu	12	2:26 2.3	8:27 0.9	14:34 2.5	21:00 0.7
	S	13	2:22 2.6	8:24 0.5	14:40 2.8	21:03 0.5		S A	Tu	13	3:50 2.5	9:45 0.6	15:58 2.8	22:17 0.6			W	13	3:19 2.4	9:17 0.7	15:23 2.6	21:48 0.6
	S	14	3:18 2.6	9:17 0.5	15:50 2.9	21:55 0.5			W	14	4:32 2.5	10:28 0.6	16:34 2.8	22:54 0.5			Th	14	4:00 2.5	10:00 0.6	16:05 2.8	22:20 0.5
	M	15	4:08 2.6	10:05 0.5	16:15 2.9	22:38 0.4			Th	15	5:07 2.6	11:06 0.5	17:12 2.9	23:28 0.4			F	15	4:38 2.7	10:35 0.5	16:43 2.9	22:57 0.3
S	Tu	16	4:50 2.6	10:48 0.5	16:55 2.9	23:18 0.4			F	16	5:40 2.7	11:38 0.5	17:47 3.0	. . . . .			S	16	5:05 2.8	11:10 0.4	17:17 3.0	23:30 0.2
A	W	17	5:30 2.6	11:27 0.5	17:34 3.0	23:53 0.4		●	S	17	0:00 0.3	6:09 2.8	12:10 0.4	18:20 3.0			S	17	5:37 2.9	11:42 0.3	17:52 3.0	. . . . .
●	Th	18	6:05 2.6	12:01 0.5	18:10 3.0	. . . . .			S	18	0:33 0.2	6:40 2.8	12:40 0.4	18:52 3.0		● E	M	18	0:03 0.2	6:08 3.0	12:15 0.2	18:25 3.0
	F	19	0:27 0.4	6:36 2.6	12:34 0.5	18:45 2.9			M	19	1:06 0.2	7:10 2.9	13:14 0.3	19:25 2.9			Tu	19	0:36 0.2	6:43 3.1	12:58 0.2	19:02 3.0
	S	20	1:00 0.4	7:07 2.6	13:05 0.5	19:17 2.9		E	Tu	20	1:39 0.3	7:45 2.9	13:52 0.3	20:02 2.9			W	20	1:10 0.2	7:18 3.0	13:32 0.2	19:40 2.9
	S	21	1:33 0.4	7:40 2.7	13:40 0.6	19:52 2.8			W	21	2:16 0.4	8:25 2.8	14:34 0.4	20:43 2.8			Th	21	1:49 0.3	8:00 3.0	14:14 0.2	20:21 2.8
	M	22	2:07 0.4	8:13 2.7	14:15 0.6	20:28 2.7			Th	22	2:56 0.5	9:06 2.8	15:20 0.5	21:20 2.7			F	22	2:31 0.4	8:47 2.9	15:04 0.4	21:12 2.6
	Tu	23	2:45 0.4	8:51 2.7	14:58 0.6	21:10 2.7			F	23	3:40 0.6	9:57 2.7	16:16 0.6	22:25 2.5			S	23	3:22 0.6	9:42 2.8	16:05 0.5	22:15 2.5
E	W	24	3:25 0.5	9:36 2.6	15:45 0.6	21:57 2.6			S	24	4:37 0.7	11:02 2.6	17:28 0.7	23:39 2.4			S	24	4:25 0.8	10:50 2.7	17:19 0.6	23:33 2.4
	Th	25	4:10 0.6	10:28 2.6	16:40 0.7	22:52 2.5		☽	S	25	5:53 0.8	12:18 2.6	18:48 0.7	. . . . .		N ☽	M	25	5:45 0.8	12:07 2.6	18:39 0.6	. . . . .
☽	F	26	5:06 0.7	11:30 2.6	17:48 0.7	. . . . .			M	26	1:04 2.4	7:15 0.7	13:35 2.7	20:03 0.5			Tu	26	0:58 2.4	7:08 0.7	13:24 2.8	19:52 0.5
	S	27	0:00 2.4	6:15 0.7	12:40 2.6	19:05 0.6		N	Tu	27	2:02 2.5	8:28 0.5	14:48 3.0	21:10 0.3			W	27	2:10 2.6	8:18 0.5	14:30 3.0	20:53 0.3
	S	28	1:18 2.5	7:28 0.7	13:50 2.8	20:16 0.5			W	28	3:26 2.8	9:29 0.3	15:43 3.2	22:05 0.1		P	Th	28	3:10 2.9	9:15 0.2	15:27 3.2	21:45 0.0
	M	29	2:31 2.6	8:38 0.5	14:55 3.0	21:21 0.3		P	Th	29	4:19 3.0	10:28 0.0	16:35 3.4	22:53 —0.1			F	29	4:00 3.1	10:07 0.0	16:17 3.4	22:32 —0.2
N	Tu	30	3:35 2.8	9:40 0.3	15:58 3.2	22:18 0.1											S	30	4:44 3.3	10:55 —0.2	17:05 3.5	23:18 —0.3
	W	31	4:33 3.0	10:35 0.1	16:47 3.4	23:10 —0.1										E	S	31	5:27 3.5	11:38 —0.3	17:50 3.5	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the German Charts for this region, and which is 1.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Apia Mean Local Civil for the meridian 171° 44,′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
○	M	1	0:00 −0.3	6:08 3.5	12:22 −0.3	18:32 3.5
	Tu	2	0:40 −0.2	6:48 3.5	13:03 −0.2	19:13 3.3
	W	3	1:20 0.0	7:30 3.3	13:43 0.0	19:55 3.1
	Th	4	2:00 0.2	8:11 3.1	14:27 0.2	20:38 2.8
	F	5	2:43 0.4	8:55 2.9	15:13 0.4	21:25 2.6
	S	6	3:30 0.7	9:43 2.7	16:05 0.6	22:17 2.4
S	S	7	4:24 0.9	10:40 2.5	17:04 0.8	23:20 2.2
	M	8	5:30 1.0	11:43 2.4	18:11 0.9	. . . . .
☾ A	Tu	9	0:32 2.1	6:42 1.0	12:52 2.4	19:16 0.9
	W	10	1:40 2.2	7:46 1.0	13:53 2.4	20:10 0.8
	Th	11	2:30 2.3	8:37 0.8	14:44 2.6	20:56 0.6
	F	12	3:12 2.5	9:19 0.7	15:28 2.7	21:40 0.5
	S	13	3:52 2.7	9:58 0.5	16:07 2.8	22:18 0.4
	S	14	4:26 2.9	10:35 0.3	16:43 2.9	22:58 0.3
E	M	15	5:01 3.0	11:12 0.2	17:22 3.0	23:30 0.2
	Tu	16	5:37 3.1	11:51 0.1	18:00 3.1	. . . . .
●	W	17	0:06 0.2	6:16 3.2	12:30 0.0	18:38 3.0
	Th	18	0:45 0.2	6:57 3.2	13:13 0.1	19:22 2.9
	F	19	1:27 0.3	7:43 3.1	14:08 0.2	20:10 2.8
	S	20	2:15 0.4	8:34 3.0	14:57 0.3	21:06 2.6
N	S	21	3:12 0.6	9:33 2.8	16:02 0.4	22:13 2.5
P	M	22	4:22 0.7	10:42 2.8	17:12 0.5	23:29 2.5
☽	Tu	23	5:40 0.7	11:57 2.7	18:25 0.5	. . . . .
	W	24	0:45 2.6	6:55 0.6	13:08 2.8	19:32 0.4
	Th	25	1:50 2.8	8:00 0.4	14:11 3.0	20:30 0.2
	F	26	2:45 3.0	8:55 0.2	15:07 3.1	21:20 0.1
	S	27	3:02 3.2	9:45 0.0	15:57 3.2	22:09 −0.1
E	S	28	4:20 3.3	10:32 −0.1	16:45 3.3	22:52 −0.1
	M	29	5:01 3.4	11:15 −0.2	17:27 3.3	23:33 −0.1
○	Tu	30	5:42 3.4	11:58 −0.1	18:09 3.2	. . . . .
MAY.						
	W	1	0:13 0.0	6:28 3.4	12:39 0.0	18:50 3.1
	Th	2	0:53 0.1	7:02 3.2	13:20 0.1	19:30 2.9
	F	3	1:32 0.3	7:43 3.1	14:02 0.3	20:12 2.7
	S	4	2:12 0.5	8:26 2.8	14:45 0.5	20:55 2.5
S	S	5	2:57 0.7	9:11 2.6	15:33 0.6	21:43 2.3
	M	6	3:45 0.9	10:02 2.5	16:25 0.8	22:38 2.2
A	Tu	7	4:45 1.0	10:59 2.4	17:22 0.9	23:40 2.2
☾	W	8	5:48 1.1	12:00 2.3	18:20 0.8	. . . . .
	Th	9	0:40 2.2	6:50 1.0	13:00 2.4	19:14 0.8
	F	10	1:32 2.4	7:44 0.9	13:53 2.5	20:05 0.7
	S	11	2:18 2.6	8:30 0.7	14:42 2.6	20:53 0.5
E	S	12	3:05 2.7	9:16 0.5	15:26 2.7	21:35 0.4
	M	13	3:47 2.9	10:00 0.3	16:10 2.9	22:17 0.3
	Tu	14	4:28 3.1	10:42 0.1	16:52 3.0	22:58 0.2
	W	15	5:10 3.2	11:26 0.0	17:35 3.0	23:42 0.2
●	Th	16	5:55 3.3	12:13 0.0	18:22 3.0	. . . . .
	F	17	0:27 0.2	6:42 3.3	13:02 0.0	19:12 2.9
	S	18	1:15 0.3	7:32 3.2	13:55 0.1	20:05 2.8
N P	S	19	2:10 0.4	8:25 3.1	14:58 0.2	21:03 2.7
	M	20	3:18 0.5	9:25 3.0	15:54 0.3	22:08 2.7
	Tu	21	4:16 0.5	10:32 2.9	16:57 0.3	23:15 2.7
	W	22	5:26 0.5	11:40 2.9	18:02 0.3	. . . . .
☽	Th	23	0:20 2.8	6:32 0.4	12:45 2.9	19:02 0.3
	F	24	1:20 2.9	7:32 0.3	13:46 3.0	19:59 0.2
E	S	25	2:15 3.0	8:28 0.2	14:43 3.0	20:54 0.1
	S	26	3:05 3.1	9:22 0.1	15:36 3.1	21:42 0.1
	M	27	3:42 3.2	10:10 0.0	16:32 3.1	22:27 0.1
	Tu	28	4:38 3.3	10:55 0.0	17:06 3.0	23:10 0.1
	W	29	5:18 3.3	11:38 0.1	17:50 2.9	23:50 0.2
○	Th	30	6:00 3.2	12:20 0.1	18:30 2.8	. . . . .
	F	31	0:30 0.3	6:40 3.1	13:00 0.2	19:10 2.7
JUNE.						
S	S	1	1:10 0.5	7:20 3.0	13:40 0.4	19:49 2.6
	S	2	1:47 0.6	8:00 2.8	14:20 0.5	20:30 2.5
	M	3	2:27 0.8	8:42 2.6	15:02 0.6	21:10 2.4
A	Tu	4	3:10 0.9	9:25 2.5	15:46 0.7	21:56 2.3
	W	5	3:58 0.9	10:13 2.4	16:33 0.8	22:45 2.3
	Th	6	4:50 1.0	11:05 2.4	17:22 0.8	23:39 2.4
☾	F	7	5:48 0.9	12:00 2.4	18:15 0.8	. . . . .
E	S	8	0:33 2.4	6:43 0.8	12:57 2.4	19:10 0.7
	S	9	1:25 2.6	7:38 0.7	13:51 2.5	20:03 0.6
	M	10	2:18 2.7	8:33 0.5	14:46 2.7	20:53 0.5
	Tu	11	3:10 2.9	9:25 0.3	15:38 2.8	21:44 0.3
	W	12	4:00 3.1	10:18 0.2	16:30 2.9	22:33 0.2
	Th	13	4:48 3.2	11:10 0.0	17:20 3.0	23:25 0.2
●	F	14	5:38 3.3	12:00 −0.1	18:12 3.0	. . . . .
N	S	15	0:15 0.2	6:29 3.4	12:52 −0.1	19:04 3.0
P	S	16	1:07 0.1	7:22 3.4	13:45 −0.1	19:57 3.0
	M	17	2:01 0.2	8:15 3.3	14:40 0.0	20:53 2.9
	Tu	18	2:59 0.2	9:13 3.2	15:36 0.1	21:50 2.9
	W	19	4:00 0.3	10:12 3.1	16:33 0.2	22:48 2.9
	Th	20	5:00 0.3	11:15 3.0	17:32 0.2	23:48 2.9
☽ E	F	21	6:00 0.3	12:15 2.9	18:30 0.3	. . . . .
	S	22	0:47 2.9	7:03 0.3	13:18 2.9	19:28 0.3
	S	23	1:44 3.0	8:03 0.3	14:20 2.8	20:25 0.3
	M	24	2:38 3.0	9:00 0.3	15:14 2.8	21:17 0.3
	Tu	25	3:28 3.1	9:51 0.3	16:05 2.8	22:05 0.3
	W	26	4:15 3.1	10:38 0.2	16:50 2.8	22:50 0.3
	Th	27	4:59 3.1	11:22 0.2	17:33 2.8	23:33 0.4
S	F	28	5:40 3.1	12:02 0.2	18:14 2.7	. . . . .
○	S	29	0:12 0.4	6:21 3.0	12:40 0.3	18:50 2.6
	S	30	0:50 0.5	7:00 2.9	13:17 0.4	19:28 2.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the German Charts for this region, and which is 1.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Apia Mean Local Civil, for the meridian 171° 44′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
A	M	1	1:24 0.6	7:35 2.8	13:58 0.5	20:00 2.5
	Tu	2	1:59 0.7	8:12 2.7	14:29 0.5	20:36 2.5
	W	3	2:35 0.8	8:50 2.6	15:07 0.6	21:13 2.5
	Th	4	3:16 0.8	9:28 2.5	15:46 0.7	21:56 2.5
	F	5	4:01 0.8	10:13 2.5	16:30 0.7	22:45 2.5
E	S	6	4:52 0.8	11:05 2.4	17:22 0.7	23:38 2.5
☾	S	7	5:50 0.8	12:02 2.4	18:18 0.7	. . . . .
	M	8	0:38 2.6	6:55 0.7	13:07 2.5	19:20 0.7
	Tu	9	1:40 2.7	8:00 0.6	14:12 2.6	20:21 0.6
	W	10	2:41 2.9	9:08 0.4	15:16 2.7	21:22 0.4
	Th	11	3:38 3.1	10:01 0.2	16:15 2.8	22:18 0.3
N	F	12	4:32 3.3	10:56 0.0	17:08 3.0	23:12 0.1
	S	13	5:25 3.4	11:48 −0.1	18:00 3.1	. . . . .
● P	S	14	0:08 0.0	6:17 3.5	12:38 −0.2	18:50 3.2
	M	15	0:55 0.0	7:08 3.5	13:29 −0.2	19:40 3.2
	Tu	16	1:47 0.0	8:00 3.5	14:19 −0.2	20:32 3.2
	W	17	2:40 0.0	8:52 3.3	15:10 −0.1	21:22 3.1
E	Th	18	3:35 0.1	9:47 3.2	16:02 0.1	22:15 3.1
	F	19	4:28 0.2	10:43 3.0	16:57 0.2	23:12 3.0
☽	S	20	5:28 0.3	11:43 2.8	17:55 0.3	. . . . .
	S	21	0:12 2.9	6:33 0.4	12:48 2.7	18:58 0.4
	M	22	1:13 2.9	7:37 0.5	13:55 2.6	19:58 0.5
	Tu	23	2:13 2.9	8:39 0.5	14:55 2.6	20:55 0.5
	W	24	3:07 2.9	9:33 0.5	15:48 2.6	21:47 0.4
S	Th	25	3:57 3.0	10:22 0.4	16:37 2.7	22:33 0.4
	F	26	4:43 3.0	11:06 0.4	17:18 2.7	23:15 0.4
	S	27	5:28 3.0	11:43 0.3	17:55 2.7	23:53 0.4
○ A	S	28	6:01 3.0	12:17 0.3	18:28 2.7	. . . . .
	M	29	0:27 0.5	6:36 2.9	12:50 0.4	18:58 2.7
	Tu	30	1:00 0.5	7:08 2.9	13:22 0.4	19:30 2.7
	W	31	1:28 0.6	7:40 2.8	13:54 0.4	20:00 2.7

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:02 0.6	8:18 2.7	14:28 0.5	20:35 2.7
E	F	2	2:40 0.6	8:50 2.6	15:04 0.6	21:15 2.6
	S	3	3:28 0.6	9:38 2.6	15:47 0.6	22:00 2.6
	S	4	4:11 0.7	10:20 2.5	16:33 0.7	22:55 2.6
☾	M	5	5:18 0.7	11:22 2.4	17:37 0.8	. . . . .
	Tu	6	0:08 2.6	6:26 0.7	12:36 2.4	18:51 0.8
	W	7	1:15 2.7	7:40 0.6	13:54 2.5	20:08 0.6
	Th	8	2:22 2.8	8:48 0.4	15:08 2.6	21:08 0.4
N	F	9	3:25 3.1	9:48 0.2	16:03 2.8	22:06 0.2
	S	10	4:20 3.3	10:42 0.0	16:55 3.1	23:00 0.0
P	S	11	5:12 3.5	11:32 −0.2	17:43 3.2	23:50 −0.2
●	M	12	6:01 3.6	12:20 −0.3	18:30 3.4	. . . . .
	Tu	13	0:38 −0.2	6:50 3.6	13:06 −0.3	19:18 3.4
	W	14	1:27 −0.2	7:38 3.5	13:57 −0.3	20:04 3.4
E	Th	15	2:15 −0.2	8:28 3.4	14:40 −0.1	20:53 3.3
	F	16	3:06 0.0	9:18 3.2	15:32 0.1	21:43 3.1
	S	17	3:57 0.2	10:10 3.0	16:23 0.3	22:37 3.0
	S	18	4:56 0.4	11:10 2.7	17:22 0.5	23:38 2.8
☽	M	19	6:00 0.5	12:18 2.5	18:27 0.6	. . . . .
	Tu	20	0:42 2.7	7:10 0.6	13:30 2.5	19:33 0.7
	W	21	1:48 2.7	8:17 0.6	14:37 2.5	20:35 0.6
S	Th	22	2:47 2.7	9:13 0.6	15:32 2.5	21:28 0.6
	F	23	3:37 2.8	10:00 0.5	16:17 2.6	22:15 0.5
A	S	24	4:22 2.9	10:41 0.4	16:55 2.7	22:53 0.4
	S	25	5:01 2.9	11:16 0.3	17:27 2.7	23:28 0.4
	M	26	5:35 3.0	11:50 0.3	17:57 2.8	. . . . .
○	Tu	27	0:00 0.4	6:06 2.9	12:21 0.3	18:25 2.8
	W	28	0:28 0.4	6:38 2.9	12:50 0.3	18:55 2.8
E	Th	29	1:00 0.4	7:08 2.9	13:22 0.3	19:27 2.8
	F	30	1:33 0.4	7:43 2.8	13:54 0.4	20:02 2.8
	S	31	2:12 0.4	8:20 2.7	14:32 0.5	20:42 2.7

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	2:58 0.5	9:00 2.6	15:10 0.6	21:28 2.7
	M	2	3:47 0.6	9:52 2.5	16:08 0.8	22:27 2.6
	Tu	3	4:52 0.7	11:00 2.4	17:13 0.9	23:41 2.6
☾	W	4	6:10 0.7	12:23 2.3	18:36 0.8	. . . . .
N	Th	5	0:59 2.6	7:29 0.6	13:46 2.4	19:55 0.6
	F	6	2:10 2.8	8:37 0.4	14:53 2.7	20:59 0.4
	S	7	3:12 3.1	9:35 0.2	15:49 3.0	21:55 0.1
	S	8	4:07 3.3	10:25 −0.1	16:38 3.2	22:45 −0.1
P	M	9	4:57 3.5	11:12 −0.3	17:23 3.4	23:32 −0.3
●	Tu	10	5:43 3.6	11:57 −0.3	18:07 3.5	. . . . .
E	W	11	0:19 −0.3	6:30 3.6	12:43 −0.3	18:50 3.5
	Th	12	1:08 −0.3	7:15 3.5	13:26 −0.3	19:35 3.5
	F	13	1:48 −0.2	8:00 3.3	14:10 −0.1	20:20 3.3
	S	14	2:35 0.0	8:47 3.1	14:57 0.1	21:10 3.1
	S	15	3:26 0.2	9:42 2.8	15:49 0.4	22:02 2.9
	M	16	4:23 0.4	10:37 2.6	16:48 0.6	23:02 2.7
☽	Tu	17	5:27 0.7	11:47 2.4	17:55 0.8	. . . . .
S	W	18	0:10 2.6	6:40 0.8	13:02 2.3	19:07 0.8
	Th	19	1:19 2.5	7:47 0.8	14:10 2.4	20:12 0.8
	F	20	2:20 2.6	8:44 0.7	15:05 2.5	21:05 0.7
A	S	21	3:10 2.7	9:28 0.6	15:47 2.6	21:47 0.6
	S	22	3:54 2.8	10:07 0.4	16:21 2.7	22:24 0.5
	M	23	4:30 2.9	10:43 0.3	16:52 2.8	22:57 0.4
	Tu	24	5:04 2.9	11:15 0.3	17:21 2.9	23:28 0.3
E	W	25	5:35 3.0	11:45 0.2	17:51 3.0	23:58 0.2
○	Th	26	6:07 3.0	12:17 0.2	18:22 3.0	. . . . .
	F	27	0:33 0.2	6:40 3.0	12:48 0.3	18:56 3.0
	S	28	1:08 0.2	7:15 2.9	13:23 0.4	19:33 2.9
	S	29	1:48 0.3	7:53 2.8	14:01 0.5	20:17 2.8
	M	30	2:36 0.4	8:40 2.6	14:48 0.6	21:10 2.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the German Charts for this region, and which is 1.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Apia Mean Local Civil, for the meridian 171° 44′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.), and when diminished by 12 give the times after noon, for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	3:33	9:38	15:47	22:13
			0.5	2.5	0.8	2.6
N	W	2	4:43	10:53	17:04	23:30
			0.7	2.3	0.9	2.6
☾	Th	3	6:02	12:20	18:30	. . .
			0.7	2.4	0.8	. . .
	F	4	0:48	7:18	13:36	19:45
			2.7	0.6	2.5	0.6
	S	5	1:58	8:21	14:38	20:45
			2.9	0.4	2.8	0.3
	S	6	2:57	9:15	15:29	21:38
			3.1	0.1	3.1	0.0
P	M	7	3:50	10:03	16:16	22:27
			3.3	—0.1	3.3	—0.2
	Tu	8	4:38	10:51	17:00	23:12
			3.4	—0.2	3.5	—0.3
E	W	9	5:24	11:33	17:44	23:56
			3.5	—0.3	3.5	—0.3
●	Th	10	6:08	12:15	18:24	. . .
			3.5	—0.2	3.5	. . .
	F	11	0:38	6:50	12:57	19:07
			—0.3	3.4	—0.1	3.4
	S	12	1:22	7:34	13:40	19:50
			—0.1	3.2	0.1	3.3
	S	13	2:08	8:20	14:25	20:36
			0.1	2.9	0.3	3.0
	M	14	2:57	9:10	15:15	21:28
			0.3	2.7	0.6	2.8
S	Tu	15	3:51	10:05	16:12	22:27
			0.5	2.5	0.8	2.6
	W	16	4:52	11:10	17:20	23:32
			0.7	2.3	0.9	2.5
☽	Th	17	6:00	12:23	18:32	. . .
			0.8	2.2	0.9	. . .
	F	18	0:40	7:05	13:29	19:36
			2.4	0.8	2.3	0.9
A	S	19	1:42	8:00	14:20	20:27
			2.5	0.7	2.4	0.8
	S	20	2:34	8:45	15:00	21:10
			2.6	0.6	2.6	0.7
	M	21	3:16	9:27	15:45	21:46
			2.7	0.5	2.7	0.5
	Tu	22	3:53	10:12	16:12	22:21
			2.8	0.4	2.8	0.4
E	W	23	4:26	10:35	16:45	22:53
			2.9	0.3	3.0	0.3
	Th	24	5:05	11:08	17:18	23:31
			2.9	0.3	3.1	0.2
○	F	25	5:38	11:43	17:53	. . .
			3.0	0.2	3.1	. . .
	S	26	0:08	6:15	12:20	18:32
			0.1	3.0	0.3	3.1
	S	27	0:48	6:55	13:00	19:15
			0.1	2.9	0.4	3.1
	M	28	1:36	7:40	13:44	20:04
			0.2	2.8	0.5	3.0
	Tu	29	2:27	8:32	14:38	20:59
			0.3	2.6	0.6	2.8
N	W	30	3:27	9:37	15:43	22:05
			0.4	2.5	0.7	2.7
	Th	31	4:37	10:51	17:00	23:20
			0.5	2.4	0.8	2.7
NOVEMBER.						
☾	F	1	5:49	12:08	18:20	. . .
			0.5	2.5	0.7	. . .
P	S	2	0:33	6:58	13:17	19:27
			2.8	0.4	2.7	0.5
	S	3	1:40	7:57	14:13	20:25
			2.9	0.3	2.9	0.3
	M	4	2:37	8:50	15:04	21:16
			3.0	0.1	3.1	0.1
E	Tu	5	3:28	9:40	15:52	22:05
			3.2	0.0	3.3	—0.1
	W	6	4:17	10:27	16:37	22:50
			3.3	—0.1	3.4	—0.2
	Th	7	5:03	11:10	17:18	23:35
			3.3	—0.1	3.5	—0.2
●	F	8	5:47	11:51	18:01	. . .
			3.3	—0.1	3.5	. . .
	S	9	0:20	6:28	12:33	18:43
			—0.2	3.1	0.0	3.4
	S	10	1:01	7:12	13:15	19:25
			0.0	3.0	0.2	3.2
	M	11	1:45	7:57	13:58	20:10
			0.2	2.8	0.4	3.0
S	Tu	12	2:32	8:43	14:46	20:58
			0.3	2.6	0.6	2.8
	W	13	3:21	9:35	15:37	21:50
			0.5	2.4	0.8	2.6
	Th	14	4:15	10:30	16:36	22:48
			0.7	2.3	0.9	2.4
A	F	15	5:10	11:30	17:40	23:50
			0.8	2.2	1.0	2.4
☽	S	16	6:07	12:28	18:41	. . .
			0.8	2.3	1.0	. . .
	S	17	0:49	7:01	13:20	19:33
			2.4	0.8	2.4	0.9
	M	18	1:42	7:52	14:06	20:17
			2.4	0.7	2.5	0.7
E	Tu	19	2:28	8:38	14:50	21:03
			2.5	0.6	2.7	0.6
	W	20	3:10	9:18	15:30	21:43
			2.6	0.5	2.8	0.4
	Th	21	3:52	9:58	16:10	22:22
			2.8	0.4	3.0	0.2
	F	22	4:33	10:37	16:50	23:05
			2.9	0.3	3.1	0.1
	S	23	5:15	11:18	17:32	23:50
			2.9	0.3	3.2	0.1
○	S	24	5:58	12:02	18:17	. . .
			2.9	0.3	3.2	. . .
	M	25	0:37	6:44	12:47	19:04
			0.1	2.9	0.3	3.2
N	Tu	26	1:27	7:35	13:38	19:55
			0.1	2.8	0.4	3.1
P	W	27	2:21	8:30	14:34	20:52
			0.2	2.7	0.5	3.0
	Th	28	3:20	9:32	15:38	21:55
			0.3	2.7	0.5	2.9
	F	29	4:22	10:37	16:47	23:02
			0.3	2.7	0.5	2.8
☾	S	30	5:27	11:43	17:56	. . .
			0.4	2.7	0.5	. . .
DECEMBER.						
	S	1	0:10	6:28	12:46	18:58
			2.8	0.3	2.8	0.4
E	M	2	1:14	7:28	13:44	20:00
			2.9	0.3	2.9	0.3
	Tu	3	2:18	8:24	14:38	20:55
			2.9	0.2	3.1	0.2
	W	4	3:10	9:17	15:27	21:46
			3.0	0.1	3.2	0.1
	Th	5	4:00	10:05	16:14	22:34
			3.1	0.1	3.3	0.0
	F	6	4:47	10:50	17:58	23:20
			3.1	0.0	3.4	0.0
	S	7	5:31	11:32	17:42	. . .
			3.0	0.1	3.3	. . .
●	S	8	0:03	6:14	12:14	18:24
			0.0	2.9	0.2	3.2
S	M	9	0:45	6:54	12:55	19:07
			0.1	2.8	0.3	3.1
	Tu	10	1:26	7:37	13:37	19:47
			0.2	2.7	0.5	3.0
	W	11	2:07	8:18	14:18	20:30
			0.3	2.6	0.6	2.8
	Th	12	2:50	9:00	15:00	21:13
			0.5	2.5	0.8	2.6
A	F	13	3:34	9:45	15:47	22:00
			0.6	2.4	0.9	2.5
	S	14	4:18	10:30	16:37	22:48
			0.7	2.3	0.9	2.4
	S	15	5:05	11:20	17:30	23:40
			0.8	2.3	0.9	2.3
☽	M	16	5:55	12:12	18:24	. . .
E			0.8	2.4	0.9	. . .
	Tu	17	0:36	6:50	13:05	19:18
			2.3	0.8	2.5	0.8
	W	18	1:32	7:42	13:58	20:12
			2.4	0.7	2.6	0.6
	Th	19	2:26	8:33	14:49	21:05
			2.5	0.6	2.8	0.5
	F	20	3:18	9:24	15:39	21:57
			2.6	0.5	3.0	0.3
	S	21	4:10	10:13	16:27	22:47
			2.7	0.4	3.1	0.1
	S	22	4:59	11:00	17:16	23:38
			2.8	0.3	3.3	0.0
N	M	23	5:48	11:50	18:06	. . .
○			2.9	0.2	3.3	. . .
	Tu	24	0:27	6:37	12:40	18:55
			0.0	3.0	0.2	3.4
P	W	25	1:18	7:28	13:32	19:47
			—0.1	3.0	0.2	3.3
	Th	26	2:10	8:20	14:26	20:40
			0.0	3.0	0.2	3.2
	F	27	3:08	9:15	15:23	21:38
			0.0	2.9	0.3	3.1
	S	28	3:58	10:12	16:34	22:37
			0.1	2.9	0.3	3.0
E	S	29	4:57	11:11	17:23	23:40
			0.2	2.9	0.4	2.9
☾	M	30	5:55	12:12	18:29	. . .
			0.3	2.9	0.4	. . .
	Tu	31	0:44	6:55	13:13	19:34
			2.8	0.4	2.9	0.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the German Charts for this region, and which is 1.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Apia Mean Local Civil, for the meridian 171° 44′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	0:44 3.5	6:52 0.1	13:11 3.3	19:10 0.2
	Tu	2	1:38 3.6	7:47 0.0	14:06 3.3	20:04 0.1
	W	3	2:32 3.7	8:43 0.0	15:00 3.3	20:58 0.1
N	Th	4	3:26 3.8	9:38 −0.1	15:55 3.4	21:52 0.0
○ P	F	5	4:20 3.8	10:34 −0.1	16:50 3.4	22:49 0.0
	S	6	5:16 3.9	11:30 −0.2	17:46 3.5	23:45 0.0
	S	7	6:11 3.9	12:26 −0.2	18:44 . . . 3.5 . . .	
	M	8	0:42 −0.1	7:08 3.9	13:21 −0.2	19:40 3.5
	Tu	9	1:40 −0.1	8:04 3.9	14:16 −0.2	20:36 3.6
E	W	10	2:36 −0.1	9:00 3.9	15:11 −0.2	21:31 3.6
☾	Th	11	3:33 −0.1	9:57 3.8	16:06 −0.1	22:26 3.7
	F	12	4:30 −0.1	10:53 3.7	16:58 −0.1	23:20 3.7
	S	13	5:25 0.0	11:48 3.6	17:50 0.0 . . .	
	S	14	0:11 3.6	6:19 0.1	12:42 3.5	18:41 0.1
	M	15	1:02 3.6	7:12 0.2	13:34 3.3	19:30 0.3
	Tu	16	1:50 3.5	8:02 0.3	14:25 3.1	20:16 0.4
S	W	17	2:36 3.4	8:50 0.4	15:13 3.0	21:00 0.6
A	Th	18	3:22 3.3	9:36 0.5	15:57 2.8	21:40 0.7
●	F	19	4:06 3.2	10:18 0.6	16:40 2.7	22:19 0.8
	S	20	4:48 3.1	11:00 0.7	17:17 2.6	22:56 0.8
	S	21	5:31 3.0	11:40 0.7	17:56 2.6	23:37 0.8
	M	22	6:15 3.0	12:21 0.7	18:37 . . . 2.6 . . .	
	Tu	23	0:21 0.8	7:00 3.0	13:05 0.7	19:20 2.7
	W	24	1:11 0.7	7:46 3.0	13:50 0.6	20:06 2.9
E	Th	25	2:01 0.6	8:34 3.1	14:37 0.5	20:56 3.0
	F	26	2:56 0.4	9:24 3.1	15:27 0.4	21:48 3.2
☽	S	27	3:51 0.3	10:14 3.2	16:16 0.3	22:39 3.4
	S	28	4:44 0.2	11:04 3.3	17:06 0.2	23:30 3.5
	M	29	5:38 0.1	11:57 3.4	17:56 0.1 . . .	
	Tu	30	0:22 3.7	6:31 0.0	12:48 3.4	18:47 0.0
N	W	31	1:14 3.8	7:24 −0.1	13:40 3.4	19:39 0.0

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:07 3.8	8:16 −0.1	14:32 3.4	20:31 0.0
P	F	2	3:00 3.9	9:11 −0.1	15:27 3.4	21:26 0.0
○	S	3	3:55 3.9	10:07 −0.1	16:22 3.4	22:23 0.0
	S	4	4:51 3.8	11:04 −0.1	17:20 3.4	23.20 0.0
	M	5	5:48 3.8	12:00 −0.1	18:19 . . . 3.4 . . .	
E	Tu	6	0:20 0.0	6:47 3.8	12:58 0.0	19:16 3.5
	W	7	1:19 0.0	7:44 3.7	13:54 0.0	20:14 3.6
	Th	8	2:17 0.0	8:41 3.7	14:49 0.0	21:09 3.6
	F	9	3:14 0.0	9:38 3.7	15:43 0.0	22.08 3.7
☾	S	10	4:09 0.0	10:32 3.6	16:35 0.0	22:53 3.7
	S	11	5:01 0.0	11:25 3.5	17:24 0.1	23:42 3.6
	M	12	5:52 0.1	12:14 3.4	18:10 . . . 0.2 . . .	
	Tu	13	0:30 3.6	6:40 0.2	13:02 3.2	18:56 0.3
S A	W	14	1:16 3.5	7:27 0.3	13:37 3.1	19:37 0.4
	Th	15	2:00 3.4	8:11 0.4	14:30 2.9	20:17 0.6
	F	16	2:44 3.2	8:58 0.6	15:10 2.8	20:56 0.7
	S	17	3:28 3.1	9:36 0.7	15:51 2.7	21:35 0.8
●	S	18	4:11 3.0	10:19 0.8	16:31 2.6	22:18 0.8
	M	19	4:56 2.9	11:02 0.8	17:15 2.6	23:05 0.8
	Tu	20	5:44 2.9	11:48 0.8	18:01 2.7	23:57 0.7
E	W	21	6:32 2.9	12:37 0.7	18:52 . . . 2.8 . . .	
	Th	22	0:51 0.6	7:28 3.0	13:27 0.6	19:44 3.0
	F	23	1:47 0.5	8:13 3.1	14:26 0.4	20:35 3.2
	S	24	2:41 0.3	9:05 3.2	15:06 0.3	21:26 3.4
	S	25	3:34 0.2	9:55 3.3	15:55 0.2	22:19 3.6
☽	M	26	4:26 0.0	10:45 3.4	16:44 0.0	23:09 3.7
	Tu	27	5:17 −0.1	11:34 3.5	17:33 0.0 . . .	
N	W	28	0:00 3.8	6:08 −0.2	12:25 3.5	18:23 −0.1
	Th	29	0:51 3.9	7:00 −0.2	13:15 3.5	19:15 −0.1

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	1:42 3.9	7:58 −0.1	14:08 3.5	20:07 −0.1
	S	2	2:37 3.8	8:47 −0.1	15:02 3.4	21:02 0.0
○	S	3	3:32 3.7	9:42 0.0	16:00 3.4	22:00 0.0
	M	4	4:30 3.7	10:35 0.1	16:57 3.4	23:00 0.1
E	Tu	5	5:28 3.6	11:39 0.1	17:56 3.4 . . .	
	W	6	0:00 0.1	6:27 3.6	12:37 0.1	18:54 3.4
	Th	7	1:00 0.1	7:26 3.6	13:32 0.1	19:50 3.5
	F	8	1:57 0.0	8:22 3.5	14:27 0.1	20:43 3.6
	S	9	2:52 0.0	9:15 3.5	15:17 0.1	21:33 3.6
	S	10	3:44 0.0	10:06 3.5	16:05 0.1	22:22 3.6
☾	M	11	4:32 0.0	10:55 3.4	16:51 0.2	23:08 3.6
S	Tu	12	5:18 0.1	11:40 3.3	17:32 0.2	23:53 3.5
A	W	13	6:02 0.2	12:23 3.1	18:14 . . . 0.3 . . .	
	Th	14	0:37 3.2	6:45 0.3	13:02 3.0	18:55 0.4
	F	15	1:20 3.3	7:28 0.5	13:45 2.9	19:33 0.6
	S	16	2:05 3.2	8:10 0.6	14:25 2.8	20:14 0.7
	S	17	2:50 3.0	8:52 0.7	15:07 2.7	20:58 0.7
	M	18	3:37 2.9	9:37 0.7	15:53 2.7	21:48 0.7
● E	Tu	19	4:25 2.9	10:27 0.8	16:43 2.7	22:42 0.7
	W	20	5:18 2.9	11:18 0.7	17:36 2.8	23:38 0.6
	Th	21	6:10 2.9	12:10 0.6	18:30 . . . 3.0 . . .	
	F	22	0:36 0.5	7:08 3.0	13:04 0.5	19:22 3.2
	S	23	1:30 0.3	7:55 3.2	13:55 0.3	20:15 3.4
	S	24	2:24 0.1	8:46 3.3	14:45 0.2	21:07 3.6
	M	25	3:15 0.0	9:35 3.4	15:34 0.1	21:56 3.7
N ☽	Tu	26	4:07 −0.1	10:24 3.5	16:23 0.0	22:47 3.8
	W	27	4:56 −0.2	11:13 3.5	17:12 −0.1	23:38 3.9
	Th	28	5:47 −0.2	12:04 3.6	18:02 −0.1 . . .	
P	F	29	0:29 3.9	6:38 −0.2	12:55 3.5	18:55 −0.1
	S	30	1:22 3.8	7:30 −0.1	13:48 3.5	19:48 0.0
	S	31	2:17 3.7	8:25 0.0	14:43 3.4	20:45 0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is New Zealand Standard, 172° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon: for instance, 15:47 is 3.47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	3:13	9:22	15:40	21:43
			3.6	0.1	3.8	0.1
○	Tu	2	4:12	10:20	16:38	22:45
			3.5	0.2	3.8	0.2
	W	3	5:10	11:18	17:37	23:45
			3.4	0.3	3.4	0.2
	Th	4	6:11	12:16	18:38	. . .
			3.4	0.3	3.4	. . .
	F	5	0:43	7:08	13:10	19:25
			0.2	3.4	0.3	3.5
	S	6	1:37	8:00	14:00	20:15
			0.1	3.4	0.3	3.5
	S	7	2:27	8:50	14:47	21:02
			0.1	3.3	0.2	3.6
S	M	8	3:14	9:35	15:30	21:47
			0.1	3.3	0.3	3.6
	Tu	9	3:58	10:20	16:12	22:30
			0.2	3.2	0.3	3.5
☾ A	W	10	4:40	11:00	16:51	23:14
			0.2	3.2	0.4	3.4
	Th	11	5:22	11:40	17:32	23:57
			0.3	3.1	0.4	3.3
	F	12	6:03	12:20	18:12	. . .
			0.4	3.0	0.5	. . .
	S	13	0:40	6:45	13:01	18:55
			3.2	0.5	2.9	0.5
	S	14	1:25	7:28	13:44	19:40
			3.1	0.6	2.9	0.6
	M	15	2:13	8:13	14:31	20:30
			3.0	0.6	2.8	0.6
E	Tu	16	3:08	9:02	15:22	21:25
			2.9	0.7	2.9	0.6
●	W	17	3:57	9:55	16:16	22:23
			2.9	0.7	3.0	0.5
	Th	18	4:52	10:50	17:12	23:21
			3.0	0.6	3.1	0.4
	F	19	5:48	11:45	18:07	. . .
			3.0	0.5	3.3	. . .
	S	20	0:17	6:41	12:38	19:00
			0.3	3.1	0.4	3.4
	S	21	1:10	7:33	13:30	19:52
			0.1	3.3	0.2	3.6
N	M	22	2:08	8:23	14:21	20:43
			0.0	3.4	0.1	3.8
P	Tu	23	2:54	9:13	15:12	21:33
			−0.1	3.5	0.0	3.9
☽	W	24	3:45	10:02	16:02	22:25
			−0.2	3.6	−0.1	3.9
	Th	25	4:35	10:53	16:52	23:17
			−0.3	3.6	−0.1	3.9
	F	26	5:26	11:45	17:45	. . .
			−0.2	3.6	−0.1	. . .
	S	27	0:10	6:18	12:38	18:38
			3.8	−0.1	3.5	0.0
	S	28	1:03	7:12	13:32	19:35
			3.7	0.0	3.5	0.0
E	M	29	2:00	8:08	14:28	20:32
			3.6	0.1	3.4	0.1
	Tu	30	3:00	9:04	15:25	21:32
			3.4	0.2	3.4	0.2

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	3:58	10:01	16:20	22:30
			3.3	0.3	3.4	0.2
	Th	2	4:57	10:57	17:15	23:27
			3.3	0.4	3.4	0.3
	F	3	5:53	11:52	18:07	. . .
			3.2	0.4	3.4	. . .
	S	4	0:21	6:46	12:40	18:57
			0.3	3.2	0.4	3.4
	S	5	1:10	7:35	13:27	19:42
			0.3	3.1	0.4	3.4
S	M	6	1:57	8:19	14:10	20:27
			0.3	3.1	0.4	3.4
	Tu	7	2:40	9:00	14:50	21:08
			0.3	3.1	0.4	3.4
A	W	8	3:20	9:39	15:30	21:52
			0.3	3.1	0.4	3.4
☾	Th	9	4:00	10:20	16:10	22:35
			0.3	3.0	0.5	3.3
	F	10	4:41	10:59	16:51	23:18
			0.4	3.0	0.5	3.2
	S	11	5:23	11:40	17:35	. . .
			0.4	3.0	0.5	. . .
	S	12	0:06	6:07	12:24	18:24
			3.2	0.4	3.0	0.5
E	M	13	0:50	6:52	13:12	19:14
			3.1	0.5	3.0	0.5
	Tu	14	1:40	7:40	14:02	20:10
			3.0	0.5	3.0	0.4
	W	15	2:34	8:32	14:57	21:04
			3.0	0.5	3.1	0.4
	Th	16	3:30	9:26	15:52	22:01
			3.0	0.5	3.2	0.3
●	F	17	4:25	10:20	16:47	22:58
			3.1	0.4	3.4	0.2
	S	18	5:20	11:16	17:41	23:58
			3.2	0.3	3.5	0.1
	S	19	6:14	12:10	18:34	. . .
			3.3	0.2	3.7	. . .
N P	M	20	0:48	7:07	13:02	19:27
			−0.1	3.4	0.1	3.8
	Tu	21	1:40	7:58	13:57	20:20
			−0.2	3.5	0.0	3.9
	W	22	2:32	8:50	14:50	21:12
			−0.2	3.6	−0.1	3.9
	Th	23	3:24	9:42	15:42	22:05
			−0.3	3.6	−0.1	3.9
☽	F	24	4:16	10:35	16:36	22:58
			−0.3	3.6	−0.1	3.9
	S	25	5:08	11:28	17:31	23:53
			−0.2	3.6	−0.1	3.8
E	S	26	6:01	12:23	18:26	. . .
			−0.1	3.6	0.0	. . .
	M	27	0:50	6:57	13:18	19:22
			3.6	0.0	3.5	0.1
	Tu	28	1:48	7:51	14:12	20:20
			3.5	0.1	3.5	0.1
	W	29	2:45	8:47	15:07	21:17
			3.4	0.2	3.4	0.2
	Th	30	3:42	9:40	16:00	22:12
			3.2	0.4	3.4	0.3
○	F	31	4:38	10:32	16:50	23:05
			3.1	- 0.4	3.4	0.3

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	5:30	11:20	17:40	23:55
			3.1	0.5	3.4	0.4
S	S	2	6:17	12:05	18:28	. . .
			3.0	0.6	3.3	. . .
	M	3	0:40	7:02	12:47	19:08
			0.4	2.9	0.6	3.3
	Tu	4	1:22	7:42	13:28	19:50
			0.4	2.9	0.6	3.3
A	W	5	2:01	8:20	14:07	20:32
			0.4	2.9	0.6	3.2
	Th	6	2:42	9:00	14:47	21:14
			0.4	2.9	0.6	3.2
	F	7	3:24	9:38	15:30	21:58
			0.4	2.9	0.5	3.2
☾	S	8	4:04	10:20	16:17	22:43
			0.4	3.0	0.5	3.1
E	S	9	4:48	11:06	17:06	23:30
			0.4	3.0	0.4	3.1
	M	10	5:34	11:55	17:57	. . .
			0.4	3.1	0.4	. . .
	Tu	11	0:20	6:22	12:45	18:50
			3.1	0.4	3.2	0.3
	W	12	1:11	7:10	13:37	19:45
			3.1	0.4	3.3	0.3
	Th	13	2:06	8:02	14:31	20:40
			3.1	0.3	3.4	0.2
	F	14	3:00	8:56	15:26	21:36
			3.1	0.3	3.5	0.1
●	S	15	3:55	9:50	16:20	22:31
			3.2	0.2	3.6	0.0
N	S	16	4:50	10:45	17:14	23:27
			3.3	0.1	3.7	−0.1
P	M	17	5:45	11:41	18:08	. . .
			3.3	0.1	3.8	. . .
	Tu	18	0:22	6:40	12:37	19:08
			−0.1	3.4	0.0	3.9
	W	19	1:15	7:34	13:31	19:57
			−0.2	3.5	−0.1	3.9
	Th	20	2:09	8:30	14:27	20:52
			−0.2	3.6	−0.1	3.9
	F	21	3:08	9:24	15:24	21:48
			−0.2	3.7	−0.1	3.9
☽ E	S	22	3:57	10:19	16:20	22:42
			−0.2	3.7	−0.1	3.8
	S	23	4:50	11:12	17:16	23:40
			−0.2	3.7	−0.1	3.7
	M	24	5:45	12:06	18:12	. . .
			−0.1	3.7	0.0	. . .
	Tu	25	0:35	6:40	13:00	19:10
			3.6	0.0	3.6	0.1
	W	26	1:31	7:32	13:54	20:04
			3.5	0.1	3.6	0.2
	Th	27	2:26	8:24	14:43	20:58
			3.3	0.3	3.5	0.2
	F	28	3:20	9:13	15:34	21:48
			3.2	0.4	3.4	0.4
S	S	29	4:11	10:00	16:20	22:36
			3.0	0.5	3.4	0.5
○	S	30	5:00	10:44	17:06	23:20
			2.9	0.6	3.3	0.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is New Zealand Standard, 172° 30′ E.; 0^h is midnight, 12^h is noon: all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon: for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	5:44 2.8	11:25 0.7	17:50 3.2	. . . . .
A	Tu	2	0:04 0.6	6:25 2.7	12:05 0.7	18:34 3.1
	W	3	0:44 0.6	7:31 2.7	12:44 0.7	19:17 3.1
	Th	4	1:24 0.6	7:41 2.7	13:26 0.7	20:00 3.1
	F	5	2:05 0.6	8:22 2.8	14:11 0.7	20:44 3.1
	S	6	2:48 0.5	9:04 2.9	15:00 0.6	21:28 3.1
E	S	7	3:32 0.5	9:50 3.0	15:50 0.5	22:16 3.1
☾	M	8	4:18 0.4	10:40 3.1	16:41 0.4	23:04 3.1
	Tu	9	5:06 0.3	11:30 3.3	17:35 0.3	23:54 3.2
	W	10	5:55 0.3	12:20 3.4	18:27 0.2	. . . . .
	Th	11	0:45 3.2	6:45 0.2	13:12 3.5	19:20 0.1
	F	12	1:37 3.3	7:36 0.2	14:04 3.6	20:14 0.0
N	S	13	2:30 3.3	8:30 0.1	14:58 3.7	21:10 0.0
	S	14	3:25 3.3	9:22 0.1	15:52 3.8	22:04 −0.1
● P	M	15	4:19 3.4	10:18 0.0	16:46 3.8	23:00 −0.1
	Tu	16	5:15 3.4	11:14 0.0	17:42 3.9	23:55 −0.1
	W	17	6:18 3.4	12:11 0.0	18:40 3.9	. . . . .
	Th	18	0:52 −0.1	7:11 3.5	13:10 0.0	19:37 3.9
E	F	19	1:49 −0.2	8:08 3.6	14:08 −0.1	20:34 3.8
	S	20	2:43 −0.2	9:05 3.6	15:06 −0.1	21:32 3.8
☽	S	21	3:40 −0.2	10:00 3.7	16:04 −0.1	22:28 3.8
	M	22	4:32 −0.1	10:54 3.7	17:00 −0.1	23:23 3.7
	Tu	23	5:25 −0.1	11:46 3.7	17:54 −0.0	. . . . .
	W	24	0:16 3.6	6:17 0.0	12:37 3.7	18:48 0.0
	Th	25	1:10 3.4	7:07 0.1	13:27 3.6	19:40 0.2
S	F	26	2:01 3.3	7:55 0.3	14:16 3.5	20:30 0.3
	S	27	2:50 3.1	8:40 0.4	15:03 3.4	21:16 0.4
	S	28	3:37 2.9	9:24 0.6	15:50 3.3	22:01 0.6
○ A	M	29	4:22 2.8	10:04 0.7	16:32 3.1	22:44 0.7
	Tu	30	5:02 2.7	10:44 0.8	17:17 3.0	23:26 0.7
	W	31	5:42 2.6	11:24 0.8	18:00 3.0	. . . . .

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:07 0.8	6:22 2.6	12:07 0.8	18:44 2.9
	F	2	0:49 0.7	7:06 2.7	12:54 0.8	19:30 2.9
E	S	3	1:32 0.7	7:49 2.8	13:44 0.7	20:16 3.0
	S	4	2:18 0.6	8:37 2.9	14:37 0.5	21:04 3.0
	M	5	3:05 0.5	9:26 3.1	15:29 0.4	21:52 3.1
☾	Tu	6	3:53 0.4	10:17 3.3	16:20 0.3	22:42 3.2
	W	7	4:41 0.3	11:06 3.5	17:12 0.1	23:30 3.3
	Th	8	5:29 0.1	11:56 3.6	18:04 0.0	. . . . .
	F	9	0:20 3.3	6:19 0.1	12:47 3.7	18:56 0.0
N	S	10	1:10 3.4	7:10 0.0	13:40 3.8	19:48 −0.1
	S	11	2:02 3.4	8:02 0.0	14:31 3.8	20:42 −0.1
P	M	12	2:56 3.4	8:56 0.0	15:25 3.8	21:37 −0.1
●	Tu	13	3:51 3.4	9:58 0.0	16:21 3.8	22:34 0.0
	W	14	4:49 3.4	10:50 0.0	17:20 3.8	23:31 0.0
	Th	15	5:48 3.4	11:50 0.0	18:18 3.8	. . . . .
E	F	16	0:30 0.0	6:48 3.5	12:50 0.0	19:18 3.8
	S	17	1:27 −0.1	7:46 3.6	13:50 0.0	20:16 3.7
	S	18	2:24 −0.1	8:43 3.7	14:48 −0.1	21:13 3.7
	M	19	3:18 −0.1	9:38 3.7	15:44 −0.1	22:08 3.7
☽	Tu	20	4:11 −0.1	10:30 3.8	16:38 −0.1	23:01 3.6
	W	21	5:01 0.1	11:20 3.8	17:30 −0.1	23:52 3.5
	Th	22	5:49 0.0	12:10 3.7	18:20 0.0	. . . . .
S	F	23	0:40 3.4	6:36 0.2	12:55 3.6	19:17 0.2
	S	24	1:28 3.2	7:20 0.3	13:42 3.5	19:53 0.3
A	S	25	2:14 3.0	8:02 0.5	14:28 3.3	20:38 0.5
	M	26	2:58 2.8	8:42 0.6	15:12 3.2	21:20 0.7
	Tu	27	3:38 2.7	9:24 0.7	15:58 3.0	22:04 0.8
○	W	28	4:20 2.6	10:06 0.8	16:43 2.9	22:48 0.8
	Th	29	5:01 2.6	10:52 0.8	17:30 2.8	23:32 0.8
E	F	30	5:48 2.6	11:40 0.8	18:17 2.8	. . . . .
	S	31	0:18 0.8	6:36 2.7	12:33 0.7	19:07 2.9

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:05 0.7	7:25 2.9	13:26 0.6	19:54 3.0
	M	2	1:54 0.6	8:14 3.1	14:18 0.4	20:44 3.1
	Tu	3	2:42 0.4	9:04 3.3	15:10 0.3	21:32 3.2
	W	4	3:30 0.3	9:54 3.5	16:00 0.1	22:20 3.3
☾	Th	5	4:18 0.1	10:42 3.6	16:50 0.0	23:08 3.4
N	F	6	5:06 0.0	11:33 3.7	17:40 −0.1	23:56 3.4
	S	7	5:54 0.0	12:22 3.8	18:30 −0.1	. . . . .
	S	8	0:46 3.5	6:46 −0.1	13:14 3.8	19:23 −0.1
	M	9	1:38 3.4	7:38 −0.1	14:07 3.8	20:16 −0.1
P	Tu	10	2:32 3.4	8:34 0.0	15:08 3.7	21:12 0.0
●	W	11	3:28 3.4	9:32 0.0	16:01 3.7	22:11 0.0
E	Th	12	4:27 3.4	10:30 0.0	17:01 3.6	23:09 0.1
	F	13	5:28 3.4	11:33 0.0	18:00 3.6	. . . . .
	S	14	0:09 0.0	6:27 3.5	12:38 0.0	19:00 3.6
	S	15	1:06 0.0	7:25 3.6	13:33 0.0	19:58 3.6
	M	16	2:01 0.0	8:20 3.7	14:28 −0.1	20:52 3.6
	Tu	17	2:54 0.0	9:11 3.7	15:21 −0.1	21:44 3.6
☽	W	18	3:44 0.0	10:01 3.8	16:11 −0.1	22:35 3.5
S	Th	19	4:30 0.0	10:48 3.7	17:00 0.0	23:21 3.4
	F	20	5:16 0.1	11:35 3.7	17:45 0.1	. . . . .
	S	21	0:06 3.3	5:59 0.2	12:20 3.5	18:30 0.2
A	S	22	0:50 3.1	6:41 0.4	13:06 3.4	19:13 0.4
	M	23	1:32 3.0	7:22 0.5	13:50 3.2	20:58 0.6
	Tu	24	2:14 2.8	8:04 0.6	14:36 3.0	20:40 0.7
	W	25	2:56 2.7	8:48 0.7	15:22 2.9	21:24 0.8
E ○	Th	26	3:42 2.7	9:36 0.8	16:10 2.8	22:11 0.8
	F	27	4:29 2.7	10:27 0.8	17:01 2.8	23:00 0.8
	S	28	5:18 2.7	11:20 0.7	17:58 2.8	23:50 0.7
	S	29	6:10 2.9	12:14 0.6	18:43 2.9	. . . . .
	M	30	0:40 0.6	7:00 3.1	13:07 0.4	19:34 3.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is New Zealand Standard, 172° 30′ E.; 0^h is midnight, 12^h is noon: all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:28 0.5	7:50 3.3	13:58 0.3	20:23 3.2
	W	2	2:17 0.3	8:41 3.5	14:49 0.1	21:10 3.3
N	Th	3	3:06 0.2	9:30 3.6	15:38 0.0	21:58 3.4
☾	F	4	3:54 0.0	10:20 3.8	16:28 −0.1	22:46 3.5
	S	5	4:43 0.0	11:09 3.8	17:18 −0.2	23:35 3.5
	☉	6	5:33 −0.1	12:00 3.8	18:09 −0.2	. . . . .
	M	7	0:25 3.5	6:26 −0.1	12:52 3.8	19:01 −0.1
P	Tu	8	1:18 3.5	7:20 0.0	13:48 3.7	19:55 0.0
	W	9	2:14 3.4	8:16 0.0	14:44 3.6	20:52 0.1
E	Th	10	3:11 3.4	9:16 0.1	15:42 3.5	21:51 0.1
●	F	11	4:10 3.4	10:17 0.1	16:42 3.5	22:50 0.2
	S	12	5:08 3.5	11:19 0.1	17:44 3.4	23:48 0.2
	☉	13	6:05 3.5	12:16 0.0	18:42 3.4	. . . . .
	M	14	0:44 0.2	7:00 3.6	13:12 0.0	19:37 3.4
	Tu	15	1:35 0.2	7:52 3.7	14:04 0.0	20:28 3.4
S	W	16	2:24 0.1	8:41 3.7	14:52 0.0	21:16 3.4
	Th	17	3:10 0.2	9:28 3.7	15:39 0.0	22:02 3.4
☽	F	18	3:55 0.2	10:14 3.6	16:28 0.1	22:48 3.3
	S	19	4:37 0.3	10:58 3.5	17:07 0.2	23:28 3.2
A	☉	20	5:20 0.4	11:44 3.4	17:50 0.3	. . . . .
	M	21	0:09 3.1	6:02 0.5	12:29 3.3	18:34 0.5
	Tu	22	0:51 3.0	6:45 0.5	13:14 3.1	19:16 0.6
	W	23	1:34 2.9	7:30 0.6	14:00 3.0	20:00 0.7
E	Th	24	2:20 2.8	8:20 0.7	14:49 2.9	20:48 0.7
	F	25	3:08 2.8	9:11 0.7	15:40 2.8	21:38 0.7
○	S	26	3:59 2.9	10:04 0.6	16:32 2.8	22:28 0.7
	☉	27	4:51 3.0	11:00 0.5	17:26 2.9	23:20 0.6
	M	28	5:43 3.2	11:54 0.4	18:17 3.0	. . . . .
	Tu	29	0:11 0.5	6:35 3.3	12:45 0.2	19:08 3.1
N	W	30	1:01 0.4	7:26 3.5	13:36 0.1	19:58 3.3
	Th	31	1:51 0.2	8:16 3.7	14:26 0.0	20:47 3.4

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	2:41 0.1	9:07 3.8	15:16 −0.1	21:35 3.5
☾	S	2	3:32 0.0	9:58 3.8	16:06 −0.2	22:26 3.5
P	☉	3	4:24 −0.1	10:49 3.8	16:57 −0.2	23:17 3.5
	M	4	5:16 −0.1	11:42 3.8	17:50 −0.1	. . . . .
	Tu	5	0:09 3.5	6:10 0.0	12:35 3.7	18:44 −0.1
E	W	6	1:04 3.5	7:06 0.0	13:31 3.6	19:38 0.0
	Th	7	1:59 3.5	8:04 0.1	14:30 3.5	20:35 0.1
	F	8	2:57 3.5	9:04 0.1	15:30 3.4	21:38 0.2
●	S	9	3:52 3.5	10:02 0.1	16:29 3.3	22:30 0.3
	☉	10	4:48 3.5	11:01 0.1	17:27 3.3	23:25 0.3
	M	11	5:42 3.5	11:56 0.1	18:21 3.3	. . . . .
	Tu	12	0:15 0.3	6:33 3.6	12:47 0.1	19:11 3.2
S	W	13	1:04 0.3	7:21 3.6	13:35 0.2	19:58 3.2
	Th	14	1:50 0.3	8:08 3.5	14:20 0.2	20:44 3.2
	F	15	2:32 0.3	8:54 3.5	15:04 0.2	21:26 3.1
A	S	16	3:15 0.4	9:38 3.4	15:47 0.3	22:08 3.1
☽	☉	17	3:58 0.4	10:22 3.3	16:28 0.3	22:49 3.0
	M	18	4:40 0.5	11:06 3.2	17:11 0.4	23:31 3.0
	Tu	19	5:24 0.5	11:51 3.1	17:54 0.5	. . . . .
E	W	20	0:13 3.0	6:11 0.5	12:38 3.1	18:40 0.5
	Th	21	1:00 3.0	7:00 0.5	13:26 3.0	19:25 0.6
	F	22	1:48 3.0	7:52 0.5	14:17 2.9	20:14 0.6
	S	23	2:37 3.1	8:45 0.5	15:08 2.9	21:04 0.6
	☉	24	3:30 3.1	9:40 0.4	16:02 3.0	21:55 0.5
○	M	25	4:23 3.3	10:33 0.3	16:54 3.0	22:48 0.4
	Tu	26	5:15 3.4	11:28 0.2	17:48 3.1	23:41 0.3
N	W	27	6:07 3.6	12:20 0.1	18:38 3.2	. . . . .
P	Th	28	0:33 0.2	7:00 3.7	13:12 0.0	19:30 3.3
	F	29	1:26 0.1	7:50 3.8	14:03 −0.1	20:21 3.4
	S	30	2:20 0.0	8:43 3.8	14:55 −0.2	21:12 3.5

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	☉	1	3:12 −0.1	9:37 3.9	15:48 −0.2	22:05 3.6
	M	2	4:07 −0.1	10:30 3.8	16:40 −0.2	23:00 3.6
E	Tu	3	5:02 −0.1	11:25 3.8	17:34 −0.1	23:56 3.6
	W	4	5:58 −0.1	12:20 3.7	18:28 −0.1	. . . . .
	Th	5	0:48 3.6	6:55 0.0	13:19 3.6	19:23 0.0
	F	6	1:45 3.6	7:52 0.0	14:16 3.5	20:18 0.1
	S	7	2:40 3.6	8:50 0.1	15:14 3.3	21:11 0.2
	☉	8	3:32 3.5	9:46 0.2	16:10 3.2	22:05 0.3
●	M	9	4:24 3.5	10:38 0.2	17:03 3.2	22:57 0.4
S	Tu	10	5:14 3.5	11:30 0.3	17:58 3.1	23:42 0.4
	W	11	6:03 3.5	12:18 0.3	18:40 3.0	. . . . .
	Th	12	0:27 0.5	6:48 3.4	13:02 0.4	19:25 3.0
	F	13	1:11 0.5	7:33 3.3	13:47 0.4	20:07 2.9
A	S	14	1:52 0.5	8:17 3.3	14:28 0.4	20:47 2.9
	☉	15	2:36 0.6	9:00 3.2	15:10 0.4	21:28 2.9
	M	16	3:20 0.6	9:45 3.2	15:53 0.4	22:10 3.0
☽ E	Tu	17	4:05 0.5	10:30 3.1	16:35 0.4	22:53 3.0
	W	18	4:53 0.5	11:17 3.1	17:19 0.4	23:40 3.1
	Th	19	5:42 0.5	12:05 3.0	18:05 0.4	. . . . .
	F	20	0:28 3.1	6:32 0.4	12:54 3.0	18:52 0.4
	S	21	1:18 3.2	7:25 0.3	13:45 3.0	19:40 0.4
	☉	22	2:08 3.3	8:18 0.3	14:36 3.1	20:31 0.4
	M	23	3:00 3.4	9:10 0.2	15:27 3.1	21:23 0.3
N ○	Tu	24	3:53 3.5	10:05 0.1	16:22 3.2	22:16 0.2
	W	25	4:46 3.6	10:58 0.0	17:14 3.2	23:10 0.2
P	Th	26	5:40 3.7	11:52 0.0	18:08 3.3	. . . . .
	F	27	0:05 0.1	6:33 3.8	12:47 −0.1	19:04 3.4
	S	28	1:01 0.0	7:28 3.8	13:40 −0.2	19:58 3.5
	☉	29	1:58 0.0	8:22 3.8	14:35 −0.2	20:53 3.6
E	M	30	2:55 −0.1	9:19 3.8	15:30 −0.2	21:48 3.6
☾	Tu	31	3:52 −0.1	10:14 3.8	16:25 −0.2	22:43 3.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.8 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is New Zealand Standard, 172° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:07 7.8	8:48 1.4	15:25 7.8	21:25 0.8
	Tu	2	4:06 8.1	9:52 1.3	16:25 8.0	22:25 0.5
	W	3	5:05 8.5	10:57 1.1	17:25 8.3	23:25 0.3
N	Th	4	6:02 9.0	11:59 0.8	18:22 8.6	. . . . .
○ P	F	5	0:22 0.0	6:56 9.3	12:58 0.5	19:18 8.9
	S	6	1:17 −0.3	7:48 9.6	13:53 0.2	20:12 9.0
	S	7	2:10 −0.4	8:40 9.8	14:47 0.0	21:05 9.1
	M	8	3:02 −0.4	9:33 9.8	15:38 0.0	21:58 9.1
	Tu	9	3:50 −0.2	10:24 9.7	16:21 0.0	22:53 9.0
E	W	10	4:47 0.0	11:17 9.4	17:23 0.2	23:47 8.8
☾	Th	11	5:42 0.4	12:10 9.0	18:17 0.5	. . . . .
	F	12	0:42 8.5	6:37 0.9	13:04 8.6	19:12 0.8
	S	13	1:38 8.2	7:36 1.4	14:00 8.2	20:10 1.1
	S	14	2:38 7.9	8:38 1.7	14:57 8.1	21:07 1.3
	M	15	3:35 7.8	9:43 2.0	15:55 7.7	22:03 1.4
	Tu	16	4:32 7.8	10:45 2.0	16:50 7.5	22:57 1.5
S	W	17	5:28 7.8	11:40 2.0	17:40 7.5	23:45 1.4
A	Th	18	6:10 7.9	12:25 2.0	18:26 7.5	. . . . .
●	F	19	0:25 1.4	6:58 8.1	13:08 1.9	19:09 7.6
	S	20	1:02 1.3	7:32 8.2	13:35 1.7	19:48 7.6
	S	21	1:37 1.1	8:08 8.3	14:07 1.5	20:25 7.7
	M	22	2.10 1.0	8:45 8.4	14.38 1.2	21:02 7.8
	Tu	23	2:46 0.8	9:23 8.5	15:13 0.9	21.38 7 9
	W	24	3:24 0.7	10:00 8.5	15:52 0.7	22:20 8.0
E	Th	25	4:03 0.7	10:40 8.4	16:32 0.6	23:00 8.0
	F	26	4:45 0.8	11:22 8.3	17:15 0.6	23:47 8.0
☽	S	27	5:30 0.9	12:07 8.1	18:02 0.6	. . . . .
	S	28	0:38 7.9	6:21 1.0	12:56 7.9	18:54 0.7
	M	29	1:34 7.8	7:14 1.3	13:52 7.7	19:51 0.8
	Tu	30	2:35 7.8	8:16 1.4	14:55 7.7	20:53 0.9
N	W	31	3:40 8.0	9:25 1.5	16:02 7.8	22:00 0.8

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:43 8.3	10:37 1.3	17:06 8.0	23:05 0.6
P	F	2	5:45 8.7	11:46 1.0	18:08 8.4	. . . . .
○	S	3	0:08 0.2	6:40 9.2	12:46 0.5	19:04 8.8
	S	4	1:05 −0.1	7:34 9.6	13:40 0.1	19:57 9.2
	M	5	1:57 −0.4	8:28 9.9	14:32 −0.2	20:48 9.4
E	Tu	6	2:48 −0.5	9:12 10.0	15:20 −0.3	21:38 9.4
	W	7	3:37 −0.4	10:01 9.9	16:08 −0.3	22:28 9.3
	Th	8	4:25 −0.1	10:50 9.5	16:54 0.0	23:17 9.0
	F	9	5:13 0.3	11:38 9.1	17:42 0.3	. . . . .
☾	S	10	0:08 8.6	6:02 0.9	12:28 8.5	18:30 0.8
	S	11	1:00 8.2	6:54 1.4	13:22 7.9	19:22 1.3
	M	12	1:58 7.8	7:51 2.0	14:18 7.5	20:18 1.7
	Tu	13	2:56 7.5	8:57 2.4	15:18 7.1	21:18 1.8
S A	W	14	3:56 7.4	10:07 2.5	16:17 7.0	22:20 2.0
	Th	15	4:51 7 4	11:10 2.4	17:13 7.1	23:13 1.9
	F	16	5:40 7.6	11:58 2.2	18:01 7.2	23:58 1.7
	S	17	6:25 7.8	12:36 2.0	18:45 7.4	. . . . .
●	S	18	0:38 1.5	7:06 8.1	13:08 1.7	19:24 7.7
	M	19	1:13 1.2	7:42 8.3	13:40 1.2	20:01 8.0
	Tu	20	1:49 0.9	8:20 8.6	14.13 0.8	20:37 8.2
E	W	21	2:24 0.6	8:56 8.7	14:48 0.5	21:15 8 4
	Th	22	3:02 0.4	9:33 8.8	15:27 0.2	21:54 8.5
	F	23	3.41 0.3	10:12 8.7	16:07 0.1	22:35 8 5
	S	24	4:23 0.4	10:54 8.5	16:41 0.2	23:21 8.4
	S	25	5:07 0.6	11:38 8.3	17:35 0.4	. . . . .
☽	M	26	0:11 8.2	5:57 0.9	12:30 7.9	18:27 0.7
	Tu	27	1:07 8.0	6:51 1.2	13:28 7.7	19:25 0.9
N	W	28	2:10 7.9	7:55 1.5	14:35 7.5	20:30 1.1
	Th	29	3:18 7.9	9:08 1.6	15:46 7.6	21:42 1.1

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:25 8.2	10:26 1.5	16:58 7.9	22:58 0.9
	S	2	5:27 8.6	11:35 1.0	17:55 8.4	23:56 0.4
○	S	3	6:23 9.1	12:33 0.5	18:50 8.9	. . . . .
	M	4	0:52 0.0	7:15 9.5	13:25 0.0	19:40 9.3
E	Tu	5	1:42 −0.3	8:03 9.8	14:12 −0.3	20:29 9.6
	W	6	2:30 −0.4	8:50 9.9	14:55 −0.4	21:15 9.6
	Th	7	3:15 −0.3	9:36 9.7	15:38 −0.3	22:00 9.5
	F	8	4:00 0.0	10:21 9.4	16:21 −0.1	22:47 9.1
	S	9	4:42 0.4	11:07 8.8	17:04 0.4	23:32 8.6
☾	S	10	5:26 1.0	11:53 8.2	17:48 0.9	. . . . .
	M	11	0:22 8.1	6:12 1.6	12:43 7.6	18:35 1.4
S	Tu	12	1:15 7.6	7:08 2.1	13:38 7.1	19:27 1.9
A	W	13	2:13 7.3	8:03 2.5	14:38 6.7	20:27 2.2
	Th	14	3:14 7.1	9:13 2.7	15:41 6.6	21:30 2.3
	F	15	4:12 7.1	10:20 2.7	16:40 6.8	22:32 2.2
	S	16	5:04 7.3	11:15 2.3	17:30 7.1	23:22 1.9
	S	17	5:50 7.7	11:54 1.9	18:13 7.5	. . . . .
	M	18	0:05 1.5	6:31 8.0	12:32 1.4	18:52 7.9
● E	Tu	19	0:44 1.1	7:10 8.4	13:07 0.9	19:31 8.3
	W	20	1:22 0.7	7:48 8.7	13:42 0.5	20:10 8.6
	Th	21	1.58 0.4	8:27 8.9	14.20 0.1	20:48 8.9
	F	22	2:39 0.2	9 06 8.9	15:00 −0.1	21.30 9.0
	S	23	3.20 0.2	9.47 8.8	15.42 −0.1	22:13 8.9
	S	24	4:03 0.3	10 30 8.6	16:26 0.1	23.00 8.7
	M	25	4:49 0.5	11:18 8.2	17:13 0.4	23:52 8.4
N ☽	Tu	26	5.40 0.9	12.12 7.9	18:05 0.7	. . . . .
	W	27	0:50 8.1	6:48 1.3	13:15 7.5	19:06 1.1
	Th	28	1:54 7.9	7:45 1.6	14:25 7.4	20:15 1.4
P	F	29	3:08 7.9	9:03 1.7	15:37 7.6	21:32 1.3
	S	30	4.10 8.2	10:17 1.4	16:42 8.0	22:42 1.0
	S	31	5:10 8.6	11.22 0.9	17:40 8.5	23:43 0.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is New Zealand Standard for the meridian 172° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	6:05 9.1	12:18 0.3	18:33 9.0	. . . . .
○	Tu	2	0:39 0.2	6:55 9.4	13:05 —0.1	19:20 9.4
	W	3	1:27 —0.1	7:41 9.6	13:50 —0.3	20:05 9.6
	Th	4	2:10 —0.1	8:25 9.6	14:30 —0.3	20:50 9.6
	F	5	2:53 0.0	9:08 9.4	15:11 —0.2	21:33 9.4
	S	6	3:35 0.3	9:52 9.0	15:51 0.1	22:17 9.0
	S	7	4:14 0.7	10:35 8.4	16:30 0.6	23:02 8.6
S	M	8	4:55 1.2	11:20 7.9	17:10 1.1	23:48 8.0
	Tu	9	5:38 1.7	12:08 7.3	17:53 1.6	. . . . .
☾	W	10	0:39 7.6	6:25 2.1	13:00 6.9	18:40 2.0
A	Th	11	1:32 7.2	7:20 2.5	13:58 6.6	19:36 2.3
	F	12	2:30 7.0	8:23 2.6	15:00 6.6	20:40 2.4
	S	13	3:27 7.1	9:29 2.5	15:58 6.8	21:44 2.3
	S	14	4:20 7.3	10:23 2.2	16:48 7.1	22:40 2.0
	M	15	5:08 7.7	11:10 1.7	17:35 7.6	23:28 1.6
E	Tu	16	5:52 8.0	11:52 1.1	18:17 8.1	. . . . .
●	W	17	0:10 1.1	6:34 8.4	12:32 0.6	18:58 8.6
	Th	18	0:52 0.7	7:16 8.7	13:12 —0.2	19:42 9.0
	F	19	1:34 0.4	7:57 8.9	13:54 —0.1	20:23 9.2
	S	20	2:17 0.2	8:40 8.9	14:37 —0.2	21:08 9.3
	S	21	3:00 0.2	9:26 8.8	15:20 —0.2	21:55 9.2
N	M	22	3:47 0.2	10:13 8.5	16:08 0.1	22:45 8.9
P	Tu	23	4:38 0.6	11:05 8.2	16:58 0.4	23:40 8.6
☽	W	24	5:33 0.9	12:03 7.9	17:56 0.9	. . . . .
	Th	25	0:40 8.3	6:35 1.3	13:08 7.6	19:00 1.2
	F	26	1:43 8.1	7:47 1.5	14:17 7.6	20:12 1.4
	S	27	2:48 8.1	9:00 1.4	15:27 7.8	21:25 1.3
	S	28	3:52 8.4	10:08 1.1	16:27 8.2	22:32 1.1
E	M	29	4:49 8.6	11:05 0.7	17:22 8.6	23:30 0.8
	Tu	30	5:42 8.9	11:55 0.4	18:12 8.9	. . . . .

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	0:20 0.5	6:30 9.1	12:40 0.1	18:57 9.2
	Th	2	1:05 0.4	7:15 9.1	13:22 0.0	19:42 9.3
	F	3	1:47 0.4	8:00 9.0	14:02 0.0	20:25 9.3
	S	4	2:28 0.5	8:42 8.8	14:41 0.2	21:07 9.1
	S	5	3:08 0.8	9:24 8.4	15:20 0.5	21:49 8.8
S	M	6	3:47 1.1	10:12 8.0	15:56 0.8	22:32 8.4
	Tu	7	4:26 1.4	10:50 7.6	16:34 1.2	23:17 8.0
A	W	8	5:05 1.7	11:35 7.2	17:15 1.6	. . . . .
☾	Th	9	0:02 7.6	5:50 1.9	12:24 6.9	17:59 1.9
	F	10	0:52 7.3	6:38 2.1	13:18 6.7	18:49 2.1
	S	11	1:43 7.2	7:33 2.2	14:14 6.7	19:47 2.2
	S	12	2:38 7.2	8:30 2.0	15:10 6.9	20:47 2.1
E	M	13	3:30 7.4	9:25 1.8	16:03 7.3	21:45 1.9
	Tu	14	4:20 7.7	10:18 1.3	16:52 7.8	22:40 1.5
	W	15	5:10 8.0	11:08 0.9	17:40 8.3	23:31 1.1
	Th	16	5:56 8.3	11:54 0.4	18:27 8.7	. . . . .
●	F	17	0:18 0.7	6:42 8.6	12:40 0.0	19:13 9.1
	S	18	1:08 0.5	7:30 8.8	13:28 —0.2	20:00 9.3
	S	19	1:57 0.3	8:18 8.8	14:15 —0.2	20:50 9.4
N	M	20	2:45 0.2	9:07 8.7	15:04 —0.2	21:40 9.3
P	Tu	21	3:37 0.3	10:00 8.6	15:55 0.1	22:32 9.2
	W	22	4:31 0.6	10:56 8.3	16:50 0.4	23:28 8.9
	Th	23	5:30 0.8	11:57 8.1	17:48 0.8	. . . . .
☽	F	24	0:27 8.6	6:32 1.0	13:00 8.0	18:54 1.1
	S	25	1:28 8.5	7:38 1.1	14:03 8.0	20:01 1.2
E	S	26	2:30 8.4	8:44 1.0	15:08 8.1	21:10 1.3
	M	27	3:28 8.5	9:45 0.9	16:05 8.3	22:11 1.2
	Tu	28	4:24 8.6	10:39 0.7	16:58 8.5	23:08 1.0
	W	29	5:17 8.6	11:29 0.5	17:48 8.7	. . . . .
	Th	30	0:00 1.0	6:05 8.6	12:14 0.4	18:34 8.8
○	F	31	0:45 1.0	6:51 8.6	12:56 0.4	19:19 8.9

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:28 1.0	7:35 8.4	13:36 0.5	20:01 8.9
S	S	2	2:07 1.1	8:18 8.2	14:14 0.6	20:43 8.7
	M	3	2:45 1.2	9:00 8.0	14:52 0.8	21:25 8.5
	Tu	4	3:23 1.4	9:41 7.7	15:28 1.0	22:05 8.3
A	W	5	4:00 1.5	10:22 7.4	16:04 1.2	22:47 8.0
	Th	6	4:37 1.6	11:05 7.2	16:43 1.4	23:29 7.8
	F	7	5:18 1.7	11:50 7.1	17:25 1.6	. . . . .
☾	S	8	0:13 7.6	6:02 1.7	12:38 7.0	18:12 1.7
E	S	9	1:00 7.5	6:51 1.6	13:30 7.1	19:03 1.8
	M	10	1:50 7.5	7:42 1.5	14:28 7.3	19:57 1.7
	Tu	11	2:41 7.6	8:37 1.3	15:18 7.5	20:55 1.6
	W	12	3:34 7.7	9:32 1.0	16:12 7.9	21:55 1.4
	Th	13	4:27 8.0	10:27 0.7	17:05 8.3	22:52 1.2
	F	14	5:20 8.2	11:20 0.4	17:57 8.7	23:50 0.9
●	S	15	6:14 8.5	12:14 0.1	18:49 9.1	. . . . .
N	S	16	0:45 0.6	7:05 8.6	13:06 —0.1	19:40 9.4
P	M	17	1:40 0.5	8:00 8.8	13:58 —0.2	20:30 9.5
	Tu	18	2:33 0.3	8:54 8.8	14:52 —0.2	21:25 9.5
	W	19	3:28 0.3	9:48 8.8	15:45 0.0	22:18 9.4
	Th	20	4:23 0.3	10:45 8.7	16:40 0.2	23:12 9.3
	F	21	5:20 0.4	11:42 8.5	17:38 0.5	. . . . .
☽ E	S	22	0:08 9.1	6:18 0.6	12:42 8.4	18:38 0.8
	S	23	1:06 8.8	7:18 0.7	13:40 8.3	19:40 1.1
	M	24	2:08 8.6	8:17 0.8	14:40 8.2	20:43 1.3
	Tu	25	3:01 8.4	9:15 0.9	15:38 8.2	21:45 1.4
	W	26	3:57 8.3	10:10 0.9	16:32 8.3	22:44 1.5
	Th	27	4:51 8.2	11:02 0.9	17:23 8.3	23:38 1.5
	F	28	5:41 8.1	11:50 0.9	18:12 8.4	. . . . .
S	S	29	0:27 1.5	6:29 8.0	12:34 0.9	18:57 8.5
○	S	30	1:10 1.5	7:14 8.0	13:13 0.9	19:40 8.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is New Zealand Standard for the meridian 172° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:47 1.5	7:55 7.8	13:50 1.0	20:20 8.5
A	Tu	2	2:23 1.5	8:36 7.7	14:26 1.0	20:58 8.4
	W	3	2:57 1.5	9:15 7.6	15:00 1.1	21:37 8.3
	Th	4	3:32 1.4	9:55 7.5	15:38 1.1	22:17 8.2
	F	5	4:07 1.3	10:34 7.5	16:15 1.2	22:55 8.1
	S	6	4:46 1.2	11:15 7.5	16:55 1.2	23:37 8.0
E	S	7	5:28 1.1	12:00 7.5	17:40 1.3	. . . . .
☾	M	8	0:20 7.9	6:13 1.1	12:48 7.5	18:27 1.4
	Tu	9	1:06 7.8	7:08 1.0	13:40 7.6	19:18 1.4
	W	10	2:00 7.7	7:55 1.0	14:37 7.7	20:15 1.4
	Th	11	2:58 7.7	8:52 0.9	15:35 7.9	21:17 1.4
	F	12	3:52 7.8	9:52 0.7	16:33 8.2	22:20 1.2
N	S	13	4:52 8.0	10:52 0.5	17:32 8.6	23:25 1.0
	S	14	5:51 8.3	11:51 0.2	18:28 9.0	. . . . .
● P	M	15	0:26 0.7	6:48 8.6	12:48 0.0	19:22 9.4
	Tu	16	1:24 0.4	7:44 8.9	13:44 −0.2	20:15 9.6
	W	17	2:20 0.1	8:38 9.0	14:37 −0.3	21:07 9.8
	Th	18	3:14 0.0	9:32 9.1	15:30 −0.3	21:58 9.8
E	F	19	4:06 −0.1	10:27 9.1	16:28 −0.1	22:51 9.6
	S	20	4:58 0.0	11:20 9.0	17:17 0.2	23:44 9.3
☽	S	21	5:52 0.2	12:14 8.8	18:12 0.6	. . . . .
	M	22	0:38 8.9	6:46 0.5	13:10 8.5	19:08 1.1
	Tu	23	1:32 8.5	7:42 0.8	14:08 8.2	20:10 1.5
	W	24	2:30 8.1	8:40 1.1	15:07 8.0	21:15 1.8
	Th	25	3:27 7.8	9:38 1.3	16:04 7.9	22:18 1.9
S	F	26	4:24 7.7	10:35 1.4	16:58 7.9	23:18 1.9
	S	27	5:18 7.6	11:26 1.4	17:48 8.0	. . . . .
	S	28	0:08 1.9	6:08 7.6	12:12 1.3	18:34 8.1
○ A	M	29	0:52 1.8	6:58 7.6	12:53 1.3	19:17 8.2
	Tu	30	1:28 1.7	7:35 7.7	13:29 1.2	19:55 8.3
	W	31	1:59 1.5	8:13 7.7	14:04 1.1	20:32 8.4

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:30 1.3	8:50 7.8	14:36 1.0	21:10 8.4
	F	2	3:02 1.1	9:27 7.9	15:10 0.9	21:46 8.4
E	S	3	3:37 0.9	10:08 8.0	15:48 0.8	22:23 8.3
	S	4	4:14 0.7	10:43 8.0	16:27 0.9	23:02 8.2
	M	5	4:56 0.7	11:26 7.9	17:09 0.9	23:44 8.1
☾	Tu	6	5:39 0.7	12:14 7.9	17:55 1.1	. . . . .
	W	7	0:30 7.9	6:27 0.8	13:05 7.8	18:46 1.2
	Th	8	1:28 7.7	7:20 0.9	14:03 7.8	19:45 1.4
	F	9	2:23 7.6	8:20 0.9	15:07 7.9	20:50 1.5
N	S	10	3:27 7.6	9:25 0.9	16:10 8.1	22:00 1.4
	S	11	4:33 7.8	10:31 0.7	17:12 8.5	23:10 1.1
P	M	12	5:36 8.2	11:36 0.4	18:10 9.0	. . . . .
●	Tu	13	0:18 0.7	6:34 8.7	12:35 0.1	19:04 9.4
	W	14	1:10 0.2	7:30 9.1	13:30 −0.3	19:56 9.8
	Th	15	2:08 −0.1	8:22 9.4	14:22 −0.5	20:47 9.9
E	F	16	2:58 −0.3	9:12 9.5	15:15 −0.5	21:35 9.9
	S	17	3:42 −0.4	10:02 9.5	16:02 −0.3	22:25 9.7
	S	18	4:30 −0.2	10:52 9.3	16:52 0.1	23:15 9.3
	M	19	5:19 0.1	11:44 8.9	17:42 0.6	. . . . .
☽	Tu	20	0:07 8.8	6:10 0.5	12:38 8.5	18:35 1.2
	W	21	1:00 8.2	7:04 1.0	13:35 8.1	19:35 1.7
	Th	22	1:58 7.7	8:01 1.4	14:34 7.7	20:42 2.1
S	F	23	2:58 7.4	9:05 1.7	15:35 7.6	21:58 2.3
	S	24	4:00 7.2	10:07 1.8	16:32 7.6	22:56 2.2
A	S	25	4:56 7.2	11:08 1.8	17:23 7.7	23:48 2.1
	M	26	5:46 7.3	11:50 1.7	18:08 7.9	. . . . .
	Tu	27	0:28 1.9	6:31 7.5	12:30 1.5	18:50 8.1
○	W	28	1:00 1.6	7:10 7.7	13:05 1.3	19:27 8.2
	Th	29	1:30 1.4	7:46 7.9	13:37 1.0	20:08 8.4
E	F	30	1:59 1.0	8:21 8.1	14:10 0.8	20:38 8.5
	S	31	2:30 0.7	8:57 8.3	14:43 0.6	21:14 8.6

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:06 0.4	9:38 8.4	15:21 0.5	21:51 8.5
	M	2	3:44 0.3	10:13 8.4	16:00 0.6	22:30 8.4
	Tu	3	4:25 0.3	10:57 8.3	16:42 0.7	23:13 8.1
	W	4	5:08 0.5	11:45 8.2	17:29 0.9	. . . . .
☾	Th	5	0:02 7.9	5:57 0.7	12:38 8.0	18:22 1.2
N	F	6	0:58 7.6	6:58 1.0	13:39 7.8	19:23 1.5
	S	7	2:02 7.4	7:57 1.2	14:45 7.8	20:38 1.7
	S	8	3:13 7.5	9:07 1.2	15:58 8.0	21:50 1.5
	M	9	4:22 7.7	10:20 1.0	16:55 8.4	23:02 1.1
P	Tu	10	5:24 8.2	11:25 0.6	17:53 8.9	. . . . .
●	W	11	0:02 0.6	6:20 8.8	12:23 0.2	18:46 9.4
E	Th	12	0:54 0.1	7:12 9.3	13:15 −0.2	19:35 9.7
	F	13	1:43 −0.3	8:00 9.6	14:04 −0.4	20:23 9.9
	S	14	2:30 −0.5	8:48 9.7	14:50 −0.4	21:10 9.8
	S	15	3:15 −0.5	9:35 9.6	15:37 −0.2	21:57 9.5
	M	16	4:00 −0.2	10:23 9.3	16:22 0.2	22:45 9.0
	Tu	17	4:45 0.2	11:12 8.9	17:10 0.8	23:30 8.4
☽	W	18	5:32 0.7	12:08 8.4	18:00 1.4	. . . . .
S	Th	19	0:27 7.8	6:22 1.3	13:00 7.9	18:57 1.9
	F	20	1:25 7.3	7:20 1.8	13:59 7.5	20:04 2.4
	S	21	2:28 7.0	8:24 2.1	15:00 7.3	21:19 2.5
A	S	22	3:31 6.8	9:30 2.2	16:00 7.3	22:25 2.4
	M	23	4:28 7.0	10:32 2.1	16:51 7.4	23:13 2.2
	Tu	24	5:18 7.2	11:20 1.9	17:37 7.7	23:52 1.9
	W	25	6:00 7.5	12:00 1.6	18:17 8.0	. . . . .
E ○	Th	26	0:22 1.5	6:39 7.8	12:33 1.3	18:54 8.2
	F	27	0:54 1.1	7:15 8.2	13:07 1.0	19:30 8.5
	S	28	1:25 0.7	7:50 8.5	13:40 0.7	20:06 8.6
	S	29	1:59 0.3	8:27 8.7	14:17 0.5	20:43 8.7
	M	30	2:36 0.1	9:07 8.8	14:56 0.4	21:22 8.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is New Zealand Standard, for the meridian 172° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	3:16	9:48	15:37	22:03
			0.0	8.8	0.4	8.4
	W	2	3:58	10:34	16:22	22:50
			0.2	8.6	0.6	8.1
N	Th	3	4:44	11:28	17:10	23:42
			0.4	8.4	0.9	7.8
☾	F	4	5:35	12:19	18:07	. . .
			0.8	8.1	1.3	. . .
	S	5	0:42	6:33	13:21	19:12
			7.5	1.1	7.9	1.6
	S	6	1:51	7:41	14:30	20:27
			7.3	1.3	7.8	1.7
	M	7	3:04	8:57	15:37	21:43
			7.5	1.4	8.0	1.4
P	Tu	8	4:11	10:10	16:39	22:50
			7.9	1.1	8.5	1.0
	W	9	5:10	11:18	17:35	23:47
			8.4	0.7	8.9	0.4
E	Th	10	6:03	12:06	18:25	. . .
			8.9	0.3	9.3	. . .
●	F	11	0:34	6:52	12:58	19.12
			—0.1	9.4	0.0	9.6
	S	12	1:20	7:38	13:48	19:58
			—0.4	9.7	—0.2	9.6
	S	13	2:03	8:23	14:27	20:44
			—0.5	9.7	—0.1	9.5
	M	14	2:46	9:10	15:11	21:29
			—0.4	9.6	0.1	9.1
	Tu	15	3:28	9:55	15:54	22:15
			—0.1	9.3	0.5	8.6
S	W	16	4:10	10:43	16:39	23:02
			0.4	8.8	1.0	8.1
	Th	17	4:54	11:31	17:25	23:54
			0.9	8.3	1.5	7.5
☽	F	18	5:42	12:24	18:20	. . .
			1.4	7.8	2.0	. . .
	S	19	0:50	6:33	13:20	19:20
			7.0	1.9	7.4	2.4
A	S	20	1:51	7:34	14:20	20:27
			6.7	2.3	7.2	2.5
	M	21	2:53	8:40	15:17	21:30
			6.7	2.4	7.2	2.4
	Tu	22	3:50	9:42	16:10	22:20
			6.8	2.4	7.3	2.2
	W	23	4:40	10:32	16:55	23:00
			7.1	2.1	7.6	1.8
E	Th	24	5:22	11:17	17:37	23:37
			7.5	1.8	7.9	1.3
	F	25	6:02	11:55	18:17	. . .
			8.0	1.4	8.2	. . .
○	S	26	0:13	6:41	12:32	18:56
			0.8	8.4	1.0	8.5
	S	27	0:50	7:20	13:10	19:34
			0.4	8.8	0.6	8.6
	M	28	1:30	8:00	13:52	20:15
			0.1	9.0	0.4	8.7
	Tu	29	2:10	8:42	14:34	20:58
			—0.1	9.1	0.3	8.6
N	W	30	2:53	9:28	15:18	21:44
			—0.1	9.1	0.4	8.4
	Th	31	3:39	10:16	16:08	22:34
			0.1	8.9	0.6	8.1

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	4:27	11:10	17:00	23:30
			0.4	8.6	0.9	7.8
☾	S	2	5:21	12:05	18:00	. . .
			0.8	8.3	1.2	. . .
P	S	3	0:34	6:22	13:08	19:06
			7.6	1.2	8.1	1.4
	M	4	1:42	7:32	14:15	20:21
			7.5	1.4	8.0	1.5
	Tu	5	2:52	8:47	15:19	21:30
			7.7	1.4	8.2	1.2
E	W	6	3:55	9:56	16:19	22:33
			8.0	1.2	8.5	0.8
	Th	7	4:58	10:58	17:12	23:24
			8.5	0.9	8.8	0.4
	F	8	5:43	11:51	18:08	. . .
			8.9	0.6	9.1	. . .
●	S	9	0:12	6:32	12:39	18:52
			0.1	9.3	0.4	9.2
	S	10	0:56	7:17	13:24	19:35
			—0.1	9.4	0.3	9.2
	M	11	1:38	8:02	14:07	20:20
			—0.2	9.5	0.4	9.0
	Tu	12	2:20	8:45	14:48	21:04
			0.0	9.3	0.6	8.6
S	W	13	3:00	9:30	15:30	21:48
			0.2	9.0	0.9	8.2
	Th	14	3:40	10:15	16:12	22:34
			0.6	8.7	1.2	7.8
	F	15	4:22	11:00	16:55	23:22
			1.0	8.2	1.6	7.3
A	S	16	5:04	11:48	17:42	. . .
			1.5	7.8	1.9	. . .
☽	S	17	0:13	5:50	12:38	18:32
			7.0	1.9	7.5	2.1
	M	18	1:08	6:40	13:30	19:25
			6.8	2.2	7.2	2.2
	Tu	19	2:06	7:35	14:24	20:20
			6.7	2.3	7.2	2.2
E	W	20	3:00	8:32	15:16	21:13
			6.9	2.3	7.3	1.9
	Th	21	3:50	9:31	16:05	22:03
			7.2	2.1	7.5	1.6
	F	22	4:38	10:23	16:53	22:50
			7.6	1.8	7.8	1.1
	S	23	5:23	11:10	17:37	23:33
			8.0	1.5	8.0	1.7
	S	24	6:08	11:57	18:22	. . .
			8.5	1.1	8.3	. . .
○	M	25	0:18	6:52	12:43	19:07
			0.3	8.8	0.7	8.5
	Tu	26	1:02	7:37	13:30	19:52
			0.0	9.1	0.5	8.6
N	W	27	1:50	8:23	14:18	20:40
			—0.1	9.3	0.3	8.6
P	Th	28	2:37	9:12	15:08	21:30
			—0.1	9.3	0.4	8.5
	F	29	3:25	10:03	16:00	22:24
			0.0	9.2	0.5	8.3
	S	30	4:17	10:56	16:55	23:21
			0.3	8.9	0.7	8.1

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	5:12	11:53	17:55	. . .
			0.6	8.7	0.9	. . .
	M	2	0:24	6:14	12:53	18:58
			8.0	1.0	8.5	1.1
E	Tu	3	1:27	7:20	13:54	20:03
			7.9	1.2	8.4	1.1
	W	4	2:31	8:28	14:55	21:08
			8.0	1.4	8.4	1.0
	Th	5	3:33	9:35	15:54	22:07
			8.2	1.3	8.4	0.8
	F	6	4:30	10:37	16:49	23:00
			8.4	1.2	8.5	0.6
	S	7	5:22	11:32	17:41	23:50
			8.7	1.0	8.6	0.4
	S	8	6:12	12:22	18:30	. . .
			8.9	0.9	8.6	. . .
●	M	9	0:36	6:53	13:08	19:15
			0.3	9.0	0.9	8.6
S	Tu	10	1:18	7:43	13:50	20:00
			0.3	9.0	0.9	8.5
	W	11	1:58	8:25	14:30	20:43
			0.4	9.0	1.0	8.2
	Th	12	2:39	9:08	15:10	21:26
			0.6	8.8	1.2	8.0
	F	13	3:15	9:50	15:48	22:08
			0.8	8.6	1.3	7.7
A	S	14	3:54	10:32	16:27	22:52
			1.1	8.3	1.5	7.4
	S	15	4:32	11:14	17:05	23:36
			1.3	8.0	1.6	7.2
	M	16	5:12	11:57	17:47	. . .
			1.6	7.7	1.7	. . .
☽ E	Tu	17	0:22	5:55	12:42	18:33
			7.1	1.8	7.5	1.7
	W	18	1:12	6:44	13:30	19:22
			7.0	1.9	7.4	1.6
	Th	19	2:04	7:35	14:20	20:13
			7.1	1.9	7.4	1.5
	F	20	2:57	8:30	15:13	21:08
			7.3	1.9	7.4	1.3
	S	21	3:50	9:30	16:06	22:03
			7.5	1.8	7.6	1.1
	S	22	4:44	10:27	17:00	22:57
			7.9	1.5	7.9	0.7
	M	23	5:36	11:25	17:51	23:50
			8.4	1.2	8.1	0.4
N ○	Tu	24	6:27	12:20	18:44	. . .
			8.8	0.9	8.4	. . .
	W	25	0:42	7:18	13:14	19:35
			0.1	9.1	0.6	8.6
P	Th	26	1:33	8:08	14:06	20:27
			—0.1	9.4	0.4	8.7
	F	27	2:24	8:58	14:59	21:20
			—0.2	9.5	0.2	8.8
	S	28	3:16	9:50	15:52	22:13
			—0.1	9.5	0.2	8.7
	S	29	4:08	10:42	16:45	23:10
			0.0	9.4	0.3	8.6
E	M	30	5:03	11:36	17:40	. . .
			0.3	9.1	0.4	. . .
☾	Tu	31	0:07	5:59	12:31	18:38
			8.5	0.6	8.9	0.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from mean low water springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 4.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is New Zealand Standard, for the meridian 172° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	5:10 4.2	11:38 0.4	17:40 3.3	23:36 0.4
	Tu	2	6:08 4.6	12:38 0.1	18:40 3.3	. . . . .
	W	3	0:27 0.4	6:55 4.9	13:35 —0.2	19:35 3.3
N ○ P	Th	4	1:17 0.4	7:45 5.2	14:28 —0.3	20:28 3.3
	F	5	2:07 0.3	8:35 5.3	15:19 —0.4	21:20 3.3
	S	6	2:55 0.3	9:25 5.3	16:09 —0.4	22:13 3.3
	S	7	3:46 0.3	10:17 5.2	16:58 —0.3	23:05 3.3
	M	8	4:38 0.4	11:07 5.0	17:47 —0.2	. . . . .
	Tu	9	0:00 3.3	5:33 0.5	12:00 4.6	18:37 0.0
E	W	10	0:56 3.3	6:34 0.7	12:52 4.2	19:27 0.3
☾	Th	11	1:51 3.3	7:40 0.8	13:51 3.7	20:17 0.5
	F	12	2:41 3.4	8:52 0.9	14:58 3.4	21:08 0.7
	S	13	3:35 3.5	10:02 1.0	16:05 3.1	22:01 0.8
	S	14	4:27 3.7	11:13 1.0	17:13 2.9	22:51 0.8
	M	15	5:16 3.9	12:15 0.9	18:16 2.8	23:37 0.8
	Tu	16	6:00 4.1	13:05 0.8	19:06 2.7	. . . . .
S	W	17	0:18 0.8	6:48 4.2	13:48 0.7	19:46 2.7
A	Th	18	0:56 0.8	7:22 4.4	14:17 0.6	20:17 2.8
●	F	19	1:32 0.8	8:00 4.5	14:48 0.4	20:45 2.8
	S	20	2:05 0.8	8:38 4.5	15:20 0.2	21:10 2.9
	S	21	2:39 0.8	9:16 4.5	15:55 0.1	21:40 3.0
	M	22	3:13 0.8	9:56 4.5	16:31 0.1	22:18 3.2
	Tu	23	3:52 0.8	10:34 4.3	17:10 0.1	23:01 3.3
	W	24	4:36 0.8	11:15 4.1	17:48 0.2	23:47 3.4
E	Th	25	5:29 0.8	12:00 3.9	18:30 0.3	. . . . .
	F	26	0:37 3.5	6:30 0.8	12:52 3.6	19:14 0.5
☽	S	27	1:33 3.5	7:40 0.8	13:51 3.4	20:07 0.7
	S	28	2:35 3.7	9:56 0.8	15:00 3.2	21:06 0.8
	M	29	3:40 3.9	10:12 0.7	16:15 3.0	22:08 0.8
	Tu	30	4:43 4.2	11:25 0.5	17:30 3.0	23:12 0.7
N	W	31	5:42 4.6	12:28 0.2	18:37 3.1	. . . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:10 0.5	6:37 4.9	13:25 —0.1	19:33 3.2
P	F	2	1:05 0.3	7:30 5.2	14:16 —0.3	20:21 3.4
○	S	3	1:57 0.1	8:20 5.3	15:02 —0.4	21:06 3.5
	S	4	2:47 0.0	9:08 5.3	15:48 —0.4	21:53 3.6
	M	5	3:37 0.0	9:58 5.2	16:31 —0.3	22:38 3.7
E	Tu	6	4:25 0.1	10:45 4.8	17:14 —0.2	23:23 3.7
	W	7	5:15 0.2	11:33 4.4	17:58 0.1	. . . . .
	Th	8	0:10 3.7	6:10 0.5	12:23 3.9	18:40 0.4
	F	9	0:55 3.6	7:06 0.7	13:19 3.5	19:30 0.7
☾	S	10	1:48 3.6	8:10 0.9	14:20 3.0	20:20 0.9
	S	11	2:45 3.6	9:26 1.1	15:32 2.7	21:15 1.1
	M	12	3:43 3.6	10:45 1.2	16:56 2.6	22:10 1.1
	Tu	13	4:39 3.7	11:52 1.1	18:06 2.6	23:05 1.1
S A	W	14	5:30 3.9	12:40 1.0	18:55 2.6	23:53 1.0
	Th	15	6:15 4.1	13:15 0.8	19:28 2.8	. . . . .
	F	16	0:38 0.9	6:58 4.3	13:47 0.5	19:55 2.9
	S	17	1:15 0.8	7:37 4.4	14:17 0.3	20:20 3.1
●	S	18	1:52 0.7	8:15 4.5	14:50 0.1	20:50 3.3
	M	19	2:27 0.6	8:55 4.5	15:23 0.0	21:21 3.4
	Tu	20	3:06 0.5	9:32 4.5	15:57 0.0	21:56 3.6
E	W	21	3:47 0.4	10:11 4.3	16:32 0.0	22:35 3.7
	Th	22	4:32 0.4	10:52 4.1	17:10 0.2	23:17 3.8
	F	23	5:23 0.5	11:37 3.8	17:49 0.4	. . . . .
	S	24	0:02 3.8	6:16 0.5	12:25 3.5	18:33 0.7
	S	25	1:00 3.8	7:23 0.6	13:26 3.2	19:25 0.9
☽	M	26	2:03 3.8	8:40 0.7	14:42 2.9	20:29 1.1
	Tu	27	3:13 3.9	10:00 0.6	16:12 2.7	21:43 1.0
N	W	28	4:20 4.2	11:15 0.5	17:33 2.8	22:58 0.8
	Th	29	5:23 4.5	12:17 0.2	18:35 3.1	. . . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:00 0.5	6:20 4.8	13:10 0.0	19:23 3.3
	S	2	0:56 0.2	7:13 5.0	13:56 —0.2	20:05 3.6
○	S	3	1:47 0.0	8:03 5.1	14:38 —0.3	20:45 3.8
	M	4	2:35 —0.2	8:50 5.0	15:20 —0.3	21:25 4.0
E	Tu	5	3:21 —0.2	9:35 4.8	15:58 —0.2	22:05 4.1
	W	6	4:08 —0.1	10:21 4.5	16:36 0.0	22:47 4.1
	Th	7	4:55 0.1	11:08 4.1	17:17 0.2	23:30 4.0
	F	8	5:40 0.3	11:55 3.6	17:55 0.6	. . . . .
	S	9	0:11 3.9	6:33 0.6	12:43 3.1	18:35 0.9
	S	10	1:01 3.7	7:35 0.9	13:41 2.7	19:20 1.2
☾	M	11	1:57 3.6	8:45 1.1	14:58 2.5	20:17 1.3
S	Tu	12	2:57 3.6	10:00 1.1	16:33 2.4	21:25 1.4
A	W	13	3:56 3.6	11:06 1.1	17:42 2.5	22:30 1.3
	Th	14	4:51 3.7	11:55 0.9	18:22 2.7	23:26 1.1
	F	15	5:40 3.9	12:32 0.6	18:52 2.9	. . . . .
	S	16	0:13 0.9	6:26 4.1	13:07 0.4	19:18 3.2
	S	17	0:56 0.7	7:08 4.3	13:40 0.2	19:47 3.4
	M	18	1:37 0.5	7:48 4.4	14:14 0.0	20:18 3.7
● E	Tu	19	2:15 0.3	8:29 4.4	14:48 0.0	20:53 3.9
	W	20	2:56 0.2	9:10 4.3	15:28 0.0	21:32 4.0
	Th	21	3:40 0.1	9:51 4.2	16:01 0.1	22:10 4.1
	F	22	4:23 0.1	10:32 3.9	16:37 0.3	22:53 4.1
	S	23	5:13 0.1	11:20 3.6	17:12 0.6	23:40 4.1
	S	24	6:11 0.3	12:12 3.2	17:55 0.9	. . . . .
	M	25	0:37 4.0	7:18 0.4	13:20 2.9	18:47 1.2
N ☽	Tu	26	1:42 4.0	8:32 0.6	14:48 2.7	20:04 1.3
	W	27	2:53 4.0	9:50 0.6	16:23 2.7	21:33 1.1
	Th	28	4:03 4.2	11:00 0.4	17:32 2.8	22:48 0.8
P	F	29	5:06 4.4	11:57 0.2	18:21 3.2	23:51 0.5
	S	30	6:04 4.6	12:47 0.0	19:01 3.6	. . . . .
	S	31	0:45 0.2	6:57 4.7	13:30 —0.1	19:40 3.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	1:35 −0.1	7:44 4.6	14:08 −0.2	20:16 4.1
○	Tu	2	2:20 −0.2	8:30 4.5	14:46 −0.1	20:53 4.3
	W	3	3:05 −0.2	9:17 4.3	15:23 0.0	21:32 4.4
	Th	4	3:45 −0.2	10:00 4.0	15:58 0.2	22:10 4.3
	F	5	4:31 0.0	10:40 3.6	16:31 0.5	22:50 4.2
	S	6	5:18 0.3	11:23 3.2	17:05 0.8	23:23 4.1
	S	7	6:07 0.5	12:07 2.9	17:38 1.1	. . . . .
S	M	8	0:20 3.9	7:02 0.8	13:02 2.6	18:16 1.4
	Tu	9	1:12 3.7	8:05 0.9	14:20 2.4	19:08 1.5
☾ A	W	10	2:10 3.6	9:09 1.0	15:52 2.4	20:28 1.6
	Th	11	3:19 3.5	10:10 0.9	16:52 2.5	21:48 1.4
	F	12	4:08 3.6	10:58 0.7	17:32 2.8	22:52 1.2
	S	13	5:01 3.8	11:42 0.5	18:05 3.1	23:44 0.9
	S	14	5:52 3.9	12:20 0.3	18:38 3.4	. . . . .
	M	15	0:30 0.6	6:40 4.1	12:59 0.1	19:11 3.8
E	Tu	16	1:14 0.3	7:23 4.1	13:37 0.0	19:48 4.1
●	W	17	1:58 0.1	8:05 4.1	14:15 0.0	20:26 4.3
	Th	18	2:40 −0.1	8:50 4.0	14:50 0.1	21:05 4.4
	F	19	3:27 −0.2	9:34 3.9	15:27 0.3	21:47 4.5
	S	20	4:16 −0.2	10:20 3.6	16:03 0.5	22:33 4.4
	S	21	5:10 −0.1	11:10 3.3	16:42 0.8	23:25 4.4
N	M	22	6:08 0.1	12:04 2.9	17:28 1.1	. . . . .
P	Tu	23	0:23 4.2	7:13 0.3	13:20 2.7	18:32 1.3
☽	W	24	1:27 4.1	8:23 0.4	14:54 2.6	19:58 1.3
	Th	25	2:35 4.1	9:33 0.4	16:15 2.8	21:25 1.1
	F	26	3:42 4.1	10:35 0.3	17:12 3.1	22:35 0.8
	S	27	4:45 4.2	11:29 0.2	17:53 3.4	23:39 0.5
	S	28	5:43 4.2	12:15 0.1	18:32 3.8	. . . . .
E	M	29	0:32 0.2	6:40 4.2	12:55 0.1	19:08 4.1
	Tu	30	1:20 0.1	7:28 4.1	13:37 0.1	19:46 4.3

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	2:03 −0.1	8:13 3.9	14:12 0.2	20:20 4.4
	Th	2	2:47 −0.1	8:55 3.7	14:45 0.3	20:58 4.5
	F	3	3:30 0.0	9:35 3.4	15:18 0.5	21:38 4.5
	S	4	4:13 0.1	10:13 3.1	15:47 0.7	22:18 4.4
	S	5	4:58 0.3	10:51 2.9	16:16 1.0	23:00 4.2
S	M	6	5:43 0.4	11:31 2.7	16:45 1.2	23:45 4.0
	Tu	7	6:33 0.6	12:25 2.5	17:20 1.4	. . . . .
A	W	8	0:32 3.8	7:25 0.7	13:32 2.5	18:12 1.5
☾	Th	9	1:25 3.7	8:20 0.7	14:45 2.5	19:32 1.5
	F	10	2:22 3.6	9:12 0.7	15:44 2.7	20:55 1.4
	S	11	3:20 3.6	10:13 0.5	16:30 3.0	22:07 1.2
	S	12	4:29 3.7	10:50 0.4	17:10 3.4	23:07 0.9
E	M	13	5:13 3.7	11:33 0.3	17:50 3.7	. . . . .
	Tu	14	0:01 0.5	6:05 3.8	12:17 0.2	18:32 4.1
	W	15	0:47 0.2	6:54 3.9	13:00 0.1	19:15 4.4
	Th	16	1:36 0.0	7:41 3.8	13:40 0.2	19:58 4.6
●	F	17	2:26 −0.2	8:29 3.7	14:20 0.3	20:43 4.8
	S	18	3:17 −0.3	9:18 3.5	15:00 0.4	21:30 4.8
N	S	19	4:10 −0.3	10:06 3.3	15:40 0.6	22:20 4.8
P	M	20	5:03 −0.2	11:00 3.1	16:27 0.8	23:13 4.7
	Tu	21	6:00 −0.1	12:05 3.0	17:22 1.0	. . . . .
	W	22	0:10 4.5	7:01 0.1	13:21 2.8	18:32 1.1
	Th	23	1:11 4.3	8:05 0.2	14:41 2.9	19:52 1.1
☽	F	24	2:15 4.2	9:05 0.3	15:44 3.1	21:10 1.0
	S	25	3:20 4.0	10:02 0.3	16:35 3.3	22:20 0.8
E	S	26	4:23 3.9	10:52 0.3	17:16 3.4	23:21 0.6
	M	27	5:27 3.8	11:38 0.3	17:55 3.9	. . . . .
	Tu	28	0:14 0.4	6:21 3.7	12:23 0.3	18:35 4.2
	W	29	1:05 0.3	7:10 3.5	13:00 0.3	19:15 4.4
	Th	30	1:50 0.2	7:55 3.3	13:36 0.4	19:53 4.5
○	F	31	2:35 0.2	8:37 3.1	14:10 0.5	20:32 4.6

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:16 0.2	9:15 3.0	14:40 0.7	21:12 4.6
S	S	2	3:55 0.3	9:50 2.8	15:10 0.9	21:52 4.5
	M	3	4:36 0.3	10:21 2.7	15:39 1.1	22:32 4.3
A	Tu	4	5:18 0.4	11:01 2.7	16:10 1.2	23:14 4.1
	W	5	6:01 0.4	11:54 2.7	16:48 1.3	23:48 4.0
	Th	6	6:47 0.5	12:48 2.7	17:43 1.4	. . . . .
	F	7	0:46 3.8	7:35 0.5	13:45 2.8	18:50 1.4
☾	S	8	1:38 3.7	8:22 0.5	14:40 3.0	20:09 1.3
E	S	9	2:35 3.6	9:10 0.4	15:32 3.3	21:25 1.1
	M	10	3:34 3.5	9:59 0.4	16:22 3.6	22:33 0.9
	Tu	11	4:33 3.5	10:48 0.4	17:11 3.9	23:30 0.5
	W	12	5:32 3.5	11:38 0.3	18:00 4.3	. . . . .
	Th	13	0:28 0.2	6:27 3.5	12:24 0.3	18:49 4.6
	F	14	1:21 −0.1	7:22 3.5	13:10 0.3	19:37 4.9
●	S	15	2:15 −0.3	8:12 3.4	13:55 0.4	20:26 5.1
N	S	16	3:07 −0.4	9:05 3.3	14:41 0.5	21:16 5.1
P	M	17	4:00 −0.4	10:00 3.2	15:30 0.6	22:07 5.1
	Tu	18	4:53 −0.3	10:55 3.1	16:22 0.7	23:00 4.9
	W	19	5:47 −0.2	11:56 3.0	17:21 0.8	23:55 4.7
	Th	20	6:42 −0.1	13:00 3.1	18:27 0.8	. . . . .
	F	21	0:52 4.4	7:37 0.1	14:02 3.2	19:35 0.8
☽ E	S	22	1:50 4.1	8:30 0.3	15:00 3.3	20:48 0.8
	S	23	2:54 3.8	9:23 0.4	15:48 3.5	21:58 0.8
	M	24	4:02 3.5	10:13 0.5	16:37 3.7	23:01 0.7
	Tu	25	5:05 3.3	11:03 0.5	17:23 4.0	. . . . .
	W	26	0:02 0.7	6:06 3.2	11:48 0.5	18:08 4.2
	Th	27	0:57 0.6	6:59 3.0	12:29 0.6	18:49 4.4
	F	28	1:43 0.5	7:47 2.9	13:06 0.7	19:30 4.5
S ○	S	29	2:24 0.5	8:27 2.8	13:42 0.7	20:10 4.5
	S	30	3:01 0.4	9:00 2.8	14:15 0.8	20:49 4.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:36 0.4	9:30 2.8	14:45 0.9	21:28 4.5
A	Tu	2	4:12 0.3	10:00 2.8	15:19 1.0	22:07 4.4
	W	3	4:48 0.3	10:33 2.8	15:52 1.1	22:47 4.2
	Th	4	5:27 0.3	11:15 2.9	16:35 1.1	23:27 4.1
	F	5	6:07 0.3	12:06 3.0	17:25 1.1	. . . . .
	S	6	0:11 3.9	6:49 0.3	12:55 3.1	18:25 1.1
E	S	7	1:00 3.7	7:34 0.4	13:48 3.3	19:35 1.0
☾	M	8	1:52 3.5	8:20 0.5	14:45 3.5	20:49 0.9
	Tu	9	2:52 3.3	9:12 0.6	15:41 3.7	21:58 0.8
	W	10	3:59 3.3	10:06 0.6	16:38 4.0	23:07 0.5
	Th	11	5:05 3.2	11:08 0.5	17:35 4.4	. . . . .
	F	12	0:10 0.3	6:10 3.2	11:57 0.5	18:28 4.7
N	S	13	1:08 0.0	7:10 3.2	12:50 0.4	19:20 5.0
●	S	14	2:02 −0.2	8:05 3.2	13:40 0.3	20:10 5.2
P	M	15	2:54 −0.4	8:57 3.3	14:32 0.3	21:01 5.3
	Tu	16	3:45 −0.4	9:47 3.3	15:23 0.3	21:52 5.2
	W	17	4:33 −0.4	10:40 3.4	16:16 0.3	22:43 5.1
	Th	18	5:22 −0.3	11:35 3.4	17:10 0.4	23:35 4.7
E	F	19	6:10 −0.1	12:25 3.4	18:09 0.5	. . . . .
	S	20	0:28 4.3	6:59 0.2	13:18 3.5	19:12 0.6
☽	S	21	1:25 3.9	7:48 0.4	14:08 3.5	20:20 0.7
	M	22	2:30 3.5	8:40 0.6	15:08 3.6	21:28 0.9
	Tu	23	3:37 3.2	9:36 0.7	16:00 3.7	22:42 0.9
	W	24	4:50 2.9	10:29 0.8	16:51 3.9	23:52 0.9
	Th	25	5:58 2.8	11:18 0.8	17:40 4.1	. . . . .
S	F	26	0:47 0.9	6:55 2.8	12:04 0.8	18:25 4.2
	S	27	1:40 0.8	7:40 2.7	12:45 0.8	19:07 4.4
	S	28	2:13 0.7	8:12 2.8	13:23 0.8	19:47 4.4
♀ A	M	29	2:38 0.5	8:40 2.8	13:58 0.8	20:25 4.5
	Tu	30	3:08 0.3	9:07 2.9	14:32 0.8	21:03 4.5
	W	31	3:40 0.2	9:36 3.0	15:06 0.8	21:40 4.4

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:18 0.2	10:08 3.2	15:42 0.8	22:18 4.3
	F	2	4:48 0.2	10:45 3.3	16:23 0.8	22:57 4.1
E	S	3	5:25 0.2	11:27 3.4	17:10 0.8	23:40 3.9
	S	4	6:03 0.3	12:12 3.5	18:08 0.8	. . . . .
	M	5	0:25 3.6	6:45 0.5	13:05 3.6	19:08 0.8
☾	Tu	6	1:20 3.4	7:35 0.7	14:02 3.7	20:20 0.8
	W	7	2:22 3.1	8:30 0.8	15:06 3.8	21:38 0.7
	Th	8	3:35 3.0	9:32 0.9	16:10 4.1	22:52 0.5
	F	9	4:51 2.9	10:37 0.8	17:12 4.4	23:57 0.3
N	S	10	6:02 3.0	11:40 0.6	18:08 4.8	. . . . .
	S	11	0:55 0.0	7:02 3.2	12:37 0.4	19:02 5.1
P	M	12	1:48 −0.2	7:55 3.4	13:32 0.2	19:54 5.2
●	Tu	13	2:36 −0.3	8:42 3.5	14:22 0.0	20:45 5.3
	W	14	3:22 −0.4	9:28 3.7	15:13 −0.1	21:33 5.2
	Th	15	4:05 −0.4	10:12 3.8	16:02 0.0	22:23 4.9
E	F	16	4:49 −0.2	10:58 3.9	16:54 0.1	23:12 4.5
	S	17	5:32 0.0	11:45 3.9	17:48 0.3	. . . . .
	S	18	0:01 4.0	6:17 0.3	12:30 3.8	18:42 0.5
	M	19	0:57 3.6	7:08 0.6	13:23 3.7	19:47 0.7
☽	Tu	20	2:02 3.1	8:00 0.9	14:20 3.7	21:02 0.9
	W	21	3:15 2.8	8:55 1.0	15:20 3.7	22:21 1.0
	Th	22	4:40 2.6	9:55 1.1	16:18 3.8	23:32 1.0
S	F	23	5:53 2.6	10:51 1.0	17:11 3.9	. . . . .
	S	24	0:26 0.9	6:44 2.7	11:42 1.0	17:59 4.1
A	S	25	1:10 0.8	7:20 2.8	12:26 0.9	18:42 4.2
	M	26	1:35 0.6	7:45 2.9	13:05 0.8	19:22 4.3
	Tu	27	2:03 0.4	8:10 3.1	13:42 0.7	20:00 4.4
○	W	28	2:33 0.2	8:35 3.3	14:17 0.6	20:38 4.4
	Th	29	3:08 0.1	9:05 3.5	14:52 0.5	21:13 4.3
E	F	30	3:35 0.1	9:40 3.6	15:30 0.4	21:52 4.2
	S	31	4:09 0.1	10:13 3.7	16:12 0.4	22:30 4.0

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:43 0.3	10:52 3.8	17:01 0.4	23:15 3.8
	M	2	5:24 0.5	11:39 3.8	17:51 0.5	23:58 3.5
	Tu	3	6:01 0.7	12:30 3.8	19:54 0.6	. . . . .
☾	W	4	0:54 3.2	6:48 0.9	13:31 3.8	20:07 0.6
	Th	5	2:04 2.9	7:48 1.1	14:38 3.9	21:25 0.6
N	F	6	3:28 2.7	9:04 1.1	15:47 4.1	22:39 0.5
	S	7	4:55 2.8	10:24 0.9	16:52 4.4	23:43 0.3
	S	8	6:00 3.0	11:30 0.6	17:50 4.7	. . . . .
	M	9	0:39 0.0	6:52 3.3	12:28 0.3	18:46 4.9
P	Tu	10	1:27 −0.2	7:37 3.6	13:21 0.0	19:38 5.1
●	W	11	2:10 −0.3	8:18 3.9	14:10 −0.2	20:26 5.1
E	Th	12	2:52 −0.3	8:58 4.1	14:58 −0.3	21:13 4.8
	F	13	3:32 −0.2	9:40 4.2	15:47 −0.3	21:58 4.6
	S	14	4:13 −0.1	10:22 4.2	16:34 −0.1	22:47 4.2
	S	15	4:55 0.2	11:05 4.1	17:22 0.1	23:37 3.7
	M	16	5:35 0.5	11:50 4.0	18:17 0.4	. . . . .
	Tu	17	0:30 3.2	6:18 0.9	12:42 3.9	19:20 0.7
☽	W	18	1:34 2.8	7:08 1.1	13:38 3.7	20:30 0.9
S	Th	19	2:57 2.5	8:07 1.3	14:38 3.7	21:45 1.0
	F	20	4:30 2.5	9:17 1.3	15:40 3.7	22:53 1.0
	S	21	5:35 2.6	10:22 1.2	16:36 3.7	23:41 0.9
A	S	22	6:15 2.7	11:20 1.1	17:27 3.9	. . . . .
	M	23	0:18 0.7	6:41 3.0	12:05 0.9	18:10 4.0
	Tu	24	0:51 0.4	7:06 3.2	12:45 0.7	18:52 4.1
	W	25	1:22 0.2	7:32 3.4	13:22 0.5	19:32 4.2
E ○	Th	26	1:58 0.1	8:01 3.7	14:00 0.4	20:10 4.2
	F	27	2:25 0.1	8:34 3.9	14:38 0.2	20:50 4.1
	S	28	3:01 0.1	9:10 4.1	15:21 0.1	21:30 4.0
	S	29	3:34 0.2	9:45 4.1	16:00 0.1	22:07 3.8
	M	30	4:07 0.4	10:27 4.1	16:48 0.1	22:51 3.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	4:40	11:12	17:45	23:42
			0.7	4.1	0.2	3.2
	W	2	5:18	12:07	18:47	. . .
			0.9	4.0	0.4	. . .
N	Th	3	0:42	6:05	13:08	19:58
			2.9	1.2	4.0	0.5
☾	F	4	1:57	7:17	14:17	21:13
			2.8	1.3	4.0	0.5
	S	5	3:40	8:52	15:28	22:24
			2.6	1.2	4.1	0.4
	S	6	4:55	10:15	16:33	23:24
			2.8	0.9	4.3	0.2
	M	7	5:48	11:21	17:33	. . .
			3.2	0.6	4.5	. . .
P	Tu	8	0:15	6:32	12:17	18:28
			0.0	3.6	0.2	4.6
E	W	9	1:00	7:10	13:08	19:18
			—0.1	3.9	—0.1	4.6
●	Th	10	1:40	7:50	13:56	20:07
			—0.2	4.2	—0.3	4.6
	F	11	2:21	8:30	14:42	20:55
			—0.2	4.4	—0.3	4.3
	S	12	3:00	9:09	15:25	21:40
			0.0	4.5	—0.3	4.0
	S	13	3:35	9:48	16:12	22:25
			0.2	4.5	—0.1	3.6
	M	14	4:11	10:30	17:01	23:10
			0.4	4.4	0.1	3.2
	Tu	15	4:47	11:17	17:55	23:58
			0.8	4.2	0.4	2.9
S	W	16	5:24	12:05	18:51	. . .
			1.1	4.0	0.6	. . .
	Th	17	1:00	6:06	12:58	19:53
			2.6	1.3	3.8	0.8
☽	F	18	2:25	7:08	13:55	20:59
			2.4	1.5	3.6	0.9
A	S	19	3:58	8:28	14:54	21:58
			2.4	1.5	3.6	0.9
	S	20	4:50	9:43	15:52	22:45
			2.6	1.5	3.6	0.7
	M	21	5:23	10:45	16:45	23:27
			2.8	1.2	3.7	0.5
	Tu	22	5:52	11:35	17:38	. . .
			3.1	1.0	3.8	. . .
	W	23	0:02	6:22	12:17	18:22
			0.3	3.5	0.7	3.9
E	Th	24	0:38	6:50	13:00	19:02
			0.2	3.8	0.4	3.9
	F	25	1:17	7:28	13:41	19:45
			0.2	4.1	0.2	4.0
○	S	26	1:50	8:03	14:20	20:25
			0.1	4.3	0.0	3.9
	S	27	2:24	8:41	15:04	21:08
			0.2	4.4	—0.1	3.7
	M	28	2:57	9:22	15:51	21:51
			0.4	4.5	—0.1	3.5
	Tu	29	3:31	10:07	16:44	22:35
			0.6	4.5	—0.1	3.2
N	W	30	4:06	10:55	17:40	23:28
			0.8	4.4	0.0	3.0
	Th	31	4:48	11:51	18:42	. . .
			1.1	4.3	0.2	. . .

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	0:36	5:45	12:52	19:47
			2.7	1.3	4.1	0.3
☾	S	2	2:04	7:10	14:00	20:57
			2.6	1.3	4.1	0.4
P	S	3	3:35	8:45	15:07	22:00
			2.7	1.2	4.1	0.3
	M	4	4:36	10:03	16:13	22:57
			3.0	0.9	4.1	0.2
	Tu	5	5:23	11:10	17:13	23:45
			3.4	0.6	4.2	0.1
E	W	6	6:03	12:05	18:12	. . .
			3.8	0.3	4.2	. . .
	Th	7	0:27	6:40	12:58	19:05
			0.0	4.1	0.1	4.1
	F	8	1:12	7:20	13:40	19:52
			0.0	4.4	—0.1	4.0
●	S	9	1:50	7:58	14:27	20:37
			0.1	4.6	—0.2	3.7
	S	10	2:25	8:40	15:12	21:20
			0.2	4.7	—0.1	3.5
	M	11	3:00	9:20	15:58	22:01
			0.4	4.7	0.0	3.2
	Tu	12	3:32	10:02	16:44	22:42
			0.7	4.6	0.2	2.9
S	W	13	4:04	10:46	17:32	23:22
			0.9	4.4	0.4	2.7
	Th	14	4:37	11:32	18:20	. . .
			1.2	4.1	0.5	. . .
	F	15	0:20	5:15	12:18	19:13
			2.5	1.4	3.9	0.7
A	S	16	1:31	6:08	13:10	20:06
			2.5	1.5	3.7	0.7
☽	S	17	2:40	7:25	14:05	20:57
			2.5	1.6	3.6	0.7
	M	18	3:35	8:45	15:07	21:45
			2.7	1.5	3.5	0.6
	Tu	19	4:18	9:55	16:00	22:30
			3.0	1.3	3.5	0.5
E	W	20	4:55	10:54	16:54	23:12
			3.3	1.0	3.5	0.4
	Th	21	5:33	11:46	17:43	23:57
			3.7	0.7	3.6	0.3
	F	22	6:13	12:30	18:32	. . .
			4.0	0.4	3.7	. . .
	S	23	0:37	6:55	13:18	19:18
			0.2	4.3	0.1	3.7
	S	24	1:15	7:37	14:05	20:05
			0.2	4.6	—0.1	3.6
○	M	25	1:53	8:20	14:55	20:50
			0.3	4.8	—0.3	3.4
	Tu	26	2:32	9:05	15:44	21:35
			0.4	4.9	—0.3	3.3
N	W	27	3:10	9:54	16:37	22:27
			0.6	4.8	—0.3	3.1
P	Th	28	3:53	10:45	17:32	23:27
			0.8	4.7	—0.1	2.9
	F	29	4:45	11:40	18:29	. . .
			1.0	4.6	0.0	. . .
	S	30	0:35	5:50	12:38	19:30
			2.8	1.1	4.4	0.2

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	1:55	7:08	13:40	20:30
			2.8	1.1	4.2	0.3
	M	2	3:06	8:30	14:45	21:30
			3.0	1.0	4.0	0.3
E	Tu	3	4:00	9:46	15:52	22:22
			3.3	0.8	3.8	0.3
	W	4	4:47	10:55	16:59	23:11
			3.6	0.6	3.7	0.3
	Th	5	5:29	11:50	17:58	23:59
			3.9	0.4	3.7	0.3
	F	6	6:13	12:43	18:50	. . .
			4.2	0.3	3.5	. . .
	S	7	0:40	6:55	13:33	19:40
			0.3	4.5	0.2	3.4
	S	8	1:20	7:35	14:20	20:24
			0.3	4.7	0.1	3.2
●	M	9	1:55	8:17	15:02	21:05
			0.4	4.8	0.1	3.0
S	Tu	10	2:30	8:58	15:44	21:43
			0.6	4.7	0.2	2.9
	W	11	3:02	9:39	16:24	22:20
			0.8	4.6	0.2	2.8
	Th	12	3:35	10:20	17:05	22:55
			1.0	4.5	0.3	2.7
	F	13	4:07	11:02	17:47	23:35
			1.1	4.2	0.4	2.7
A	S	14	4:43	11:43	18:30	. . .
			1.2	4.0	0.4	. . .
	S	15	0:32	5:32	12:28	19:13
			2.7	1.3	3.8	0.5
	M	16	1:27	6:33	13:18	20:00
			2.8	1.4	3.6	0.5
☽ E	Tu	17	2:20	8:47	14:12	20:47
			3.0	1.3	3.4	0.6
	W	18	3:10	9:02	15:09	21:35
			3.2	1.2	3.3	0.6
	Th	19	4:01	10:12	16:08	22:28
			3.5	1.0	3.3	0.5
	F	20	4:51	11:10	17:08	23:14
			3.8	0.8	3.3	0.5
	S	21	5:40	12:07	18:04	. . .
			4.1	0.4	3.3	. . .
	S	22	0:01	6:28	13:00	18:58
			0.4	4.5	0.1	3.3
	M	23	0:47	7:15	13:52	19:49
			0.4	4.8	—0.1	3.3
N ○	Tu	24	1:31	8:08	14:44	20:38
			0.4	5.0	—0.3	3.3
	W	25	2:17	8:50	15:35	21:30
			0.4	5.1	—0.4	3.2
P	Th	26	3:04	9:41	16:25	22:21
			0.5	5.1	—0.4	3.2
	F	27	3:53	10:33	17:15	23:18
			0.6	5.1	—0.3	3.1
	S	28	4:49	11:27	18:08	. . .
			0.7	4.8	—0.1	. . .
	S	29	0:16	5:50	12:21	19:02
			3.1	0.8	4.5	0.1
E	M	30	1:20	6:57	13:18	19:56
			3.2	0.8	4.2	0.3
☾	Tu	31	2:21	8:09	14:20	20:50
			3.3	0.8	3.8	0.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	5:12	10:58	17:58	. . .
			0.6	1.8	—0.2	. . .
	Tu	2	0:42	6:24	11:43	18:42
			1.8	0.7	1.8	—0.3
	W	3	1:47	7:31	12:30	19:32
			1.8	0.8	1.8	—0.4
N	Th	4	2:44	8:36	13:24	20:21
○			1.8	0.8	1.8	—0.5
P	F	5	3:39	9:32	14:17	21:12
			1.9	0.8	1.8	—0.6
	S	6	4:26	10:27	15:14	22:02
			2.0	0.8	1.8	—0.6
	S	7	5:12	11:20	16:12	22:52
			2.1	0.7	1.8	—0.5
	M	8	5:54	12:18	17:10	23:40
			2.1	0.6	1.8	—0.4
	Tu	9	6:36	13:08	18:11	. . .
			2.1	0.5	1.8	. . .
E	W	10	0:28	7:16	13:52	19:14
			—0.2	2.0	0.3	1.7
☾	Th	11	1:19	7:52	14:34	20:19
			0.0	2.0	0.2	1.7
	F	12	2:13	8:30	15:21	21:24
			0.2	1.9	0.1	1.6
	S	13	3:04	9:10	16:07	22:34
			0.4	1.8	0.0	1.6
	S	14	3:58	9:47	16:52	23:42
			0.6	1.8	0.0	1.5
	M	15	4:54	10:24	17:38	. . .
			0.8	1.7	0.0	. . .
	Tu	16	0:50	6:00	11:08	18:21
			1.5	0.9	1.7	—0.1
S	W	17	1:54	7:02	11:44	19:06
			1.5	0.9	1.6	—0.1
A	Th	18	2:48	8:10	12:32	19:48
			1.6	0.9	1.6	—0.2
●	F	19	3:16	9:06	13:26	20:30
			1.6	0.9	1.6	—0.2
	S	20	3:51	9:58	14:19	21:12
			1.7	0.9	1.6	—0.2
	S	21	4:28	10:49	15:16	21:56
			1.9	0.8	1.6	—0.2
	M	22	5:04	11:32	16:12	22:40
			1.9	0.7	1.6	—0.2
	Tu	23	5:40	12:16	17:10	23:26
			2.0	0.6	1.6	—0.1
	W	24	6:16	12:54	18:08	. . .
			2.0	0.4	1.7	. . .
E	Th	25	0:14	6:54	13:30	19:06
			0.0	2.0	0.3	1.7
	F	26	1:06	7:30	14:12	20:06
			0.1	2.0	0.2	1.7
☽	S	27	1:54	8:12	14:54	21:09
			0.2	1.9	0.0	1.7
	S	28	2:50	8:52	15:38	22:10
			0.4	1.9	—0.1	1.7
	M	29	3:46	9:34	16:26	23:12
			0.5	1.9	—0.2	1.8
	Tu	30	4:52	10:17	17:14	. . .
			0.7	1.8	—0.3	. . .
N	W	31	0:18	6:00	11:05	18:07
			1.8	0.8	1.8	—0.3

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	1:22	7:12	11:57	19:01
			1.7	0.9	1.7	—0.4
P	F	2	2:21	8:20	12:56	19:56
			1.8	0.9	1.7	—0.4
○	S	3	3:12	9:16	14:00	20:49
			1.8	0.8	1.8	—0.4
	S	4	4:00	10:12	15:02	21:44
			1.9	0.7	1.8	—0.4
	M	5	4:41	11:04	16:04	22:36
			2.0	0.5	1.8	—0.3
E	Tu	6	5:21	11:50	17:09	23:24
			2.0	0.4	1.8	—0.2
	W	7	6:00	12:32	18:08	. . .
			2.0	0.2	1.8	. . .
	Th	8	0:14	6:34	13:13	19:09
			0.0	2.0	0.1	1.8
	F	9	1:08	7:16	13:56	20:08
			0.2	1.9	0.0	1.8
☾	S	10	1:54	7:51	14:40	21:07
			0.3	1.9	0.0	1.7
	S	11	2:41	8:28	15:21	22:06
			0.5	1.8	0.0	1.6
	M	12	3:31	9:02	16:06	23:06
			0.7	1.8	—0.1	1.5
	Tu	13	4:26	9:40	16:49	. . .
			0.8	1.7	—0.1	. . .
S	W	14	0:02	5:31	10:22	17:35
A			1.5	0.9	1.6	0.0
	Th	15	0:59	6:40	11:09	18:23
			1.5	0.9	1.6	0.0
	F	16	1:48	7:51	12:04	19:10
			1.5	0.9	1.5	0.0
	S	17	2:32	8:49	13:06	19:57
			1.6	0.9	1.5	0.0
●	S	18	3:11	9:40	14:10	20:47
			1.7	0.8	1.6	—0.1
	M	19	3:49	10:22	15:11	21:36
			1.8	0.7	1.6	—0.1
	Tu	20	4:26	11:02	16:09	22:24
			1.9	0.5	1.7	0.0
E	W	21	5:04	11:36	17:08	23:13
			1.9	0.3	1.8	0.0
	Th	22	5:40	12:12	18:04	. . .
			2.0	0.2	1.8	. . .
	F	23	0:06	6:21	12:52	19:00
			0.1	1.9	0.0	1.9
	S	24	0:54	7:00	13:32	19:52
			0.2	1.9	—0.1	1.9
	S	25	1:46	7:39	14:14	20:48
			0.3	1.9	—0.2	1.9
☽	M	26	2:36	8:14	14:58	21:47
			0.5	1.8	—0.2	1.9
	Tu	27	3:34	8:57	15:47	22:49
			0.6	1.8	—0.3	1.8
N	W	28	4:39	9:42	16:38	23:51
			0.7	1.8	—0.3	1.7
	Th	29	5:48	10:36	17:34	. . .
			0.8	1.7	—0.3	. . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:52	6:58	11:37	18:34
			1.7	0.8	1.7	—0.2
	S	2	1:49	8:01	12:44	19:34
			1.7	0.8	1.7	—0.2
○	S	3	2:38	8:59	13:54	20:32
			1.8	0.7	1.8	—0.2
	M	4	3:21	9:48	15:03	21:28
			1.8	0.5	1.8	—0.1
E	Tu	5	4:01	10:31	16:07	22:19
			1.9	0.3	1.9	—0.0
	W	6	4:40	11:12	17:08	23:14
			1.9	0.2	1.9	0.1
	Th	7	5:21	11:53	18:02	. . .
			1.9	0.0	1.9	. . .
	F	8	0:02	5:58	12:34	18:56
			0.2	1.9	—0.1	1.9
	S	9	0:49	6:32	13:14	19:46
			0.3	1.9	—0.1	1.8
	S	10	1:34	7:10	13:54	20:36
			0.5	1.8	—0.1	1.8
☾	M	11	2:20	7:44	14:34	21:27
			0.6	1.8	—0.1	1.7
S	Tu	12	3:11	8:22	15:14	22:19
			0.7	1.7	—0.1	1.6
A	W	13	4:10	9:00	16:00	23:11
			0.8	1.6	0.0	1.6
	Th	14	5:14	9:51	16:46	. . .
			0.9	1.5	0.1	. . .
	F	15	0:05	6:24	10:44	17:37
			1.6	0.9	1.5	0.1
	S	16	0:54	7:29	11:51	18:32
			1.6	0.8	1.5	0.1
	S	17	1:40	8:21	13:02	19:29
			1.7	0.7	1.5	0.1
	M	18	2:28	9:06	14:11	20:24
			1.7	0.6	1.6	0.1
●	Tu	19	3:03	9:42	15:12	21:20
E			1.8	0.4	1.7	0.1
	W	20	3:42	10:18	16:11	22:16
			1.8	0.2	1.8	0.1
	Th	21	4:26	10:59	17:05	23:08
			1.9	0.1	1.9	0.2
	F	22	5:06	11:33	17:54	23:57
			1.9	—0.1	2.0	0.2
	S	23	5:42	12:13	18:43	. . .
			1.9	—0.2	2.1	. . .
	S	24	0:46	6:20	12:54	19:36
			0.3	1.8	—0.3	2.1
	M	25	1:37	7:00	13:37	20:30
			0.5	1.8	—0.3	2.0
N	Tu	26	2:30	7:42	14:24	21:26
☽			0.6	1.7	—0.3	1.9
	W	27	3:30	8:28	15:14	22:23
			0.7	1.7	—0.3	1.9
	Th	28	4:32	9:19	16:06	23:19
			0.8	1.7	—0.2	1.8
P	F	29	5:39	10:20	17:06	. . .
			0.8	1.6	—0.1	. . .
	S	30	0:16	6:43	11:31	18:08
			1.7	0.7	1.6	0.0
	S	31	1:06	7:40	12:46	19:12
			1.7	0.6	1.7	0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th meridian E.; 0^h is midnight, 12^h is noon: all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3.47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E	M	1	1:52 1.7	8:28 0.4	14:01 1.7	20:12 0.1
○	Tu	2	2:34 1.7	9:10 0.3	15:06 1.8	21:16 0.2
	W	3	3:21 1.7	9:54 0.1	16:06 1.9	22:09 0.2
	Th	4	4:00 1.8	10:34 0.0	16:58 1.9	22:59 0.3
	F	5	4:34 1.8	11:14 −0.2	17:47 2.0	23:46 0.4
	S	6	5:12 1.8	11:54 −0.2	18:34 1.9	. . . . .
	S	7	0:30 0.5	5:48 1.8	12:31 −0.3	19:20 1.9
S	M	8	1:16 0.6	6:26 1.7	13:11 −0.2	20:06 1.8
	Tu	9	2:04 0.7	7:04 1.7	13:48 −0.1	20:51 1.8
☾ A	W	10	2:57 0.7	7:47 1.6	14:29 −0.1	21:38 1.8
	Th	11	3:56 0.8	8:34 1.5	15:12 0.0	22:26 1.7
	F	12	4:58 0.8	9:28 1.4	16:01 0.1	23:12 1.7
	S	13	6:00 0.7	10:33 1.4	16:54 0.2	. . . . .
	S	14	0:00 1.7	6:50 0.6	11:50 1.4	17:57 0.3
	M	15	0:47 1.7	7:35 0.5	13:05 1.5	19:03 0.3
E	Tu	16	1:30 1.7	8:18 0.3	14:12 1.6	20:10 0.3
●	W	17	2:22 1.7	9:58 0.2	15:10 1.8	21:08 0.3
	Th	18	3:03 1.8	9:37 0.0	16:01 1.9	22:03 0.3
	F	19	3:44 1.8	10:18 −0.2	16:50 2.1	22:56 0.4
	S	20	4:23 1.8	10:58 −0.3	17:41 2.2	23:47 0.5
	S	21	5:04 2.0	11:40 −0.4	18:30 2.2	. . . . .
N	M	22	0:38 0.5	5:45 1.8	12:22 −0.5	19:21 2.1
P	Tu	23	1:30 0.6	6:28 1.7	13:08 −0.4	20:11 2.1
☽	W	24	2:26 0.6	7:15 1.7	13:54 −0.3	21:01 2.0
	Th	25	3:33 0.7	8:07 1.6	14:45 −0.2	21:52 1.9
	F	26	4:24 0.7	9:07 1.6	15:39 −0.1	22:43 1.8
	S	27	5:23 0.6	10:18 1.6	16:38 0.1	23:32 1.7
	S	28	6:15 0.5	11:37 1.6	17:45 0.2	. . . . .
E	M	29	0:18 1.7	7:03 −0.4	12:55 1.6	18:58 0.3
	Tu	30	1:08 1.7	7:52 0.2	14:07 1.7	20:00 0.4
MAY.						
○	W	1	1:52 1.7	8:37 0.1	15:07 1.8	20:58 0.5
	Th	2	2:30 1.7	9:17 −0.1	15:59 1.9	21:50 0.6
	F	3	3:08 1.7	9:57 −0.2	16:46 1.9	22:40 0.6
	S	4	3:47 1.7	10:37 −0.3	17:30 2.0	23:24 0.7
	S	5	4:37 1.7	11:13 −0.3	18:12 2.0	. . . . .
S	M	6	0:10 0.7	5:07 1.7	11:52 −0.3	18:54 2.0
	Tu	7	1:00 0.7	5:58 1.6	12:30 −0.3	19:35 1.9
A	W	8	1:47 0.7	6:32 1.6	13:10 −0.2	20:16 1.9
☾	Th	9	2:45 0.7	7:20 1.5	13:50 −0.1	20:57 1.9
	F	10	3:40 0.7	8:15 1.5	14:35 0.1	21:40 1.8
	S	11	4:28 0.6	9:20 1.4	15:26 0.2	22:25 1.8
	S	12	5:17 0.5	10:30 1.4	16:25 0.3	23:10 1.8
E	M	13	6:05 0.4	11:45 1.5	17:30 0.4	23:57 1.7
	Tu	14	6:58 0.3	12:58 1.6	18:41 0.5	. . . . .
	W	15	0:47 1.7	7:35 0.1	14:02 1.7	19:47 0.5
	Th	16	1:32 1.7	8:20 −0.1	14:56 1.9	20:50 0.5
●	F	17	2:16 1.7	9:00 −0.3	15:48 2.0	21:48 0.6
	S	18	3:00 1.8	9:42 −0.4	16:39 2.1	22:43 0.6
N	S	19	3:43 1.8	10:26 −0.5	17:28 2.2	23:36 0.6
P	M	20	4:28 1.7	11:10 −0.6	18:16 2.2	. . . . .
	Tu	21	0:28 0.7	5:15 1.7	11:55 −0.5	19:03 2.2
	W	22	1:17 0.7	6:05 1.7	12:42 −0.5	19:51 2.1
	Th	23	2:15 0.6	7:01 1.7	13:30 −0.4	20:35 2.0
☽	F	24	3:11 0.6	7:58 1.6	14:22 −0.1	21:20 1.9
	S	25	4:05 0.5	9:06 1.6	15:17 0.1	22:05 1.8
E	S	26	4:52 0.4	10:23 1.6	16:20 0.3	22:46 1.8
	M	27	5:42 0.3	11:40 1.6	17:28 0.5	23:35 1.7
	Tu	28	6:20 0.2	12:57 1.6	18:33 0.6	. . . . .
	W	29	0:17 1.7	7:17 0.0	14:04 1.7	19:37 0.7
	Th	30	0:56 1.7	8:02 −0.1	15:00 1.7	20:37 0.8
○	F	31	1:38 1.7	8:42 −0.2	15:48 1.7	21:30 0.8
JUNE.						
	S	1	2:20 1.7	9:21 −0.3	16:31 1.8	22:18 0.8
S	S	2	3:02 1.7	9:58 −0.3	17:10 1.8	23:00 0.8
	M	3	3:47 1.6	10:37 −0.3	17:48 1.9	23:50 0.8
A	Tu	4	4:32 1.6	11:15 −0.3	18:26 2.0	. . . . .
	W	5	0:43 0.8	5:19 1.6	11:55 −0.2	19:04 2.0
	Th	6	1:35 0.7	6:08 1.5	12:37 −0.2	19:42 2.0
	F	7	2:25 0.7	7:08 1.5	13:19 −0.1	20:21 2.0
☾	S	8	3:07 0.6	8:02 1.5	14:07 0.1	21:01 1.9
E	S	9	3:51 0.5	9:07 1.5	15:00 0.3	21:40 1.9
	M	10	4:37 0.3	10:20 1.5	15:58 0.4	22:28 1.8
	Tu	11	5:25 0.2	11:32 1.6	17:03 0.5	23:12 1.8
	W	12	6:10 0.1	12:41 1.7	18:15 0.6	23:58 1.8
	Th	13	6:55 −0.1	13:40 1.8	19:23 0.7	. . . . .
	F	14	0:48 1.7	7:40 −0.3	14:40 1.9	20:28 0.7
●	S	15	1:31 1.7	8:25 −0.4	15:33 2.0	21:25 0.8
N	S	16	2:20 1.7	9:12 −0.5	16:25 2.1	22:20 0.8
P	M	17	3:12 1.7	9:59 −0.6	17:12 2.2	23:14 0.7
	Tu	18	4:03 1.8	10:47 −0.6	17:57 2.2	. . . . .
	W	19	0:08 0.7	4:57 1.7	11:33 −0.5	18:41 2.2
	Th	20	1:07 0.6	5:55 1.7	12:25 −0.4	19:24 2.1
	F	21	1:59 0.5	6:54 1.7	13:13 −0.2	20:06 2.0
☽	S	22	2:47 0.4	7:58 1.7	14:05 0.0	20:45 2.0
E	S	23	3:31 0.3	9:07 1.6	15:03 0.2	21:23 1.9
	M	24	4:18 0.2	10:20 1.6	16:00 0.4	22:06 1.8
	Tu	25	5:07 0.1	11:35 1.6	17:02 0.6	22:45 1.7
	W	26	5:58 0.0	12:47 1.5	18:05 0.8	23:25 1.7
	Th	27	6:40 −0.1	13:53 1.6	19:08 0.9	. . . . .
	F	28	0:07 1.7	7:23 −0.2	14:55 1.6	20:12 0.9
S	S	29	0:50 1.6	8:06 −0.2	15:40 1.6	21:10 1.0
○	S	30	1:36 1.6	8:45 −0.3	16:08 1.7	21:57 0.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3rd quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:24 1.6	9:25 −0.3	16:44 1.8	22:45 0.9
A	Tu	2	3:16 1.6	10:05 −0.3	17:19 1.9	23:40 0.8
	W	3	4:08 1.6	10:48 −0.2	17:55 2.0	. . . . .
	Th	4	0:27 0.7	5:00 1.6	11:27 −0.2	18:30 2.0
	F	5	1:10 0.6	5:55 1.6	12:10 −0.1	19:07 2.0
	S	6	1:50 0.5	6:55 1.6	13:02 0.0	19:45 2.0
E	S	7	2:38 0.4	7:55 1.6	13:48 0.2	20:20 2.0
☾	M	8	3:12 0.2	8:57 1.6	14:41 0.3	21:04 1.9
	Tu	9	3:55 0.1	10:08 1.6	15:36 0.5	21:46 1.9
	W	10	4:40 0.0	11:10 1.6	16:40 0.6	22:28 1.8
	Th	11	5:25 −0.1	12:13 1.7	17:49 0.7	23:13 1.8
	F	12	6:14 −0.3	13:18 1.8	18:59 0.8	. . . . .
N	S	13	0:02 1.8	7:03 −0.4	14:17 1.8	20:07 0.8
●	S	14	0:55 1.8	7:55 −0.5	15:13 1.9	21:04 0.8
P	M	15	1:51 1.8	8:46 −0.5	16:02 1.9	22:02 0.8
	Tu	16	2:50 1.8	9:37 −0.5	16:48 2.1	22:57 0.7
	W	17	3:49 1.8	10:28 −0.5	17:30 2.1	23:55 0.6
	Th	18	4:50 1.8	11:19 −0.4	18:12 2.1	. . . . .
E	F	19	0:43 0.5	5:50 1.8	12:08 −0.2	18:52 2.1
	S	20	1:27 0.3	6:52 1.8	12:58 0.0	19:28 2.0
☽	S	21	2:08 0.2	7:55 1.8	13:54 0.2	20:08 1.9
	M	22	2:55 0.1	8:59 1.7	14:46 0.4	20:46 1.9
	Tu	23	3:40 0.0	10:07 1.6	15:38 0.6	21:23 1.8
	W	24	4:27 0.0	11:15 1.5	16:35 0.8	22:00 1.7
	Th	25	5:12 −0.1	12:22 1.5	17:36 0.9	22:40 1.7
S	F	26	5:58 −0.1	13:24 1.5	18:42 0.9	23:22 1.6
	S	27	6:43 −0.1	14:17 1.5	19:50 0.9	. . . . .
	S	28	0:10 1.6	7:27 −0.1	14:58 1.6	20:52 0.9
○ A	M	29	1:08 1.6	8:12 −0.2	15:36 1.7	21:46 0.9
	Tu	30	2:02 1.6	8:55 −0.1	16:10 1.8	22:33 0.8
	W	31	3:00 1.6	9:40 −0.1	16:45 1.9	23:17 0.7

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:57 1.6	10:22 −0.1	17:21 1.9	23:58 0.6
	F	2	4:55 1.6	11:07 0.1	17:55 2.0	. . . . .
E	S	3	0:32 0.4	5:52 1.7	11:56 0.0	18:30 2.0
	S	4	1:09 0.3	6:47 1.7	12:45 0.1	19:07 2.0
	M	5	1:49 0.2	7:45 1.7	13:35 0.2	19:48 1.9
☾	Tu	6	2:30 0.1	8:43 1.7	14:27 0.4	20:27 1.9
	W	7	3:12 −0.1	9:42 1.8	15:22 0.5	21:07 1.8
	Th	8	3:57 −0.2	10:42 1.8	16:23 0.7	21:49 1.8
	F	9	4:45 −0.2	11:47 1.8	17:31 0.8	22:36 1.8
N	S	10	5:37 −0.3	12:51 1.7	18:41 0.8	23:30 1.7
	S	11	6:32 −0.3	13:52 1.7	19:50 0.8	. . . . .
P	M	12	0:30 1.7	7:27 −0.4	14:45 1.8	20:58 0.8
●	Tu	13	1:35 1.8	8:23 −0.4	15:32 1.8	21:48 0.7
	W	14	2:42 1.8	9:20 −0.3	16:15 2.0	22:40 0.5
	Th	15	3:46 1.8	10:13 −0.3	16:58 2.0	23:26 0.4
E	F	16	4:48 1.9	11:05 −0.2	17:35 2.0	. . . . .
	S	17	0:06 0.2	5:48 1.9	11:55 0.0	18:12 2.0
	S	18	0:48 0.1	6:47 1.9	12:50 0.1	18:54 1.9
	M	19	1:32 0.0	7:45 1.8	13:38 0.3	19:30 1.9
☽	Tu	20	2:15 −0.1	8:43 1.8	14:25 0.5	20:06 1.8
	W	21	2:59 −0.1	9:40 1.7	15:17 0.7	20:42 1.8
	Th	22	3:42 −0.1	10:39 1.6	16:11 0.8	21:21 1.7
S	F	23	4:27 −0.1	11:37 1.5	17:12 0.9	22:00 1.6
	S	24	5:13 0.0	12:34 1.5	18:22 0.9	22:50 1.6
A	S	25	6:00 0.0	13:25 1.5	19:34 0.9	23:45 1.5
	M	26	6:48 0.0	14:10 1.6	20:32 0.9	. . . . .
	Tu	27	0:50 1.5	7:38 0.0	14:50 1.7	21:22 0.8
○	W	28	1:56 1.5	8:27 0.0	15:28 1.7	22:08 0.6
	Th	29	2:58 1.6	9:17 0.0	16:08 1.8	22:40 0.5
E	F	30	3:58 1.7	10:05 0.0	16:40 1.9	23:15 0.3
	S	31	4:54 1.7	10:57 0.1	17:15 1.9	23:50 0.2

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	5:46 1.8	11:47 0.2	17:57 1.9	. . . . .
	M	2	0:30 0.1	6:39 1.9	12:35 0.2	18:33 1.9
	Tu	3	1:08 −0.1	7:30 1.9	13:24 0.3	19:11 1.9
☾	W	4	1:48 −0.2	8:22 1.9	14:05 0.5	19:50 1.8
	Th	5	2:32 −0.2	9:18 1.9	15:10 0.6	20:30 1.8
N	F	6	3:20 −0.3	10:17 1.8	16:12 0.7	21:15 1.7
	S	7	4:09 −0.3	11:18 1.8	17:19 0.8	22:08 1.7
	S	8	5:03 −0.2	12:18 1.8	18:30 0.8	23:12 1.7
	M	9	6:08 −0.2	13:16 1.8	19:35 0.8	. . . . .
P	Tu	10	0:20 1.7	7:04 −0.2	14:08 1.8	20:32 0.6
●	W	11	1:33 1.7	8:05 −0.1	14:55 1.8	21:22 0.5
E	Th	12	2:42 1.8	9:02 −0.1	15:37 1.8	22:12 0.3
	F	13	3:48 1.9	9:58 0.0	16:14 1.9	22:46 0.1
	S	14	4:48 1.9	10:57 0.1	16:58 1.9	23:29 0.0
	S	15	5:50 2.0	11:47 0.2	17:35 1.9	. . . . .
	M	16	0:10 −0.1	6:35 2.0	12:35 0.3	18:10 1.9
	Tu	17	0:52 −0.2	7:25 1.9	13:21 0.5	18:48 1.8
☽	W	18	1:34 −0.2	8:15 1.8	14:08 0.6	19:24 1.8
S	Th	19	2:14 −0.2	9:07 1.8	15:00 0.7	20:05 1.7
	F	20	2:57 −0.1	9:58 1.7	15:57 0.8	20:03 1.6
	S	21	3:40 0.0	10:50 1.6	16:59 0.9	21:33 1.6
A	S	22	4:25 0.1	11:41 1.6	18:07 0.9	22:30 1.5
	M	23	5:15 0.1	12:30 1.6	19:10 0.8	23:37 1.5
	Tu	24	6:10 0.2	13:15 1.6	20:03 0.7	. . . . .
	W	25	0:47 1.5	7:07 0.2	13:59 1.7	20:43 0.6
E ○	Th	26	1:57 1.5	8:03 0.2	14:38 1.7	21:20 0.4
	F	27	3:00 1.6	9:02 0.2	15:18 1.8	21:57 0.2
	S	28	3:56 1.8	9:57 0.2	16:02 1.8	22:33 0.1
	S	29	4:48 1.9	10:48 0.3	16:40 1.8	23:12 −0.1
	M	30	5:34 2.0	11:37 0.3	17:18 1.8	23:50 −0.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th Meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	6:25	12:25	17:50	. . .
			2.1	0.4	1.8	. . .
	W	2	0:32	7:15	13:16	18:30
			−0.3	2.1	0.5	1.8
N	Th	3	1:15	8:10	14:07	19:12
			−0.3	2.1	0.6	1.8
☾	F	4	2:00	9:00	15:02	19:58
			−0.3	2.0	0.7	1.7
	S	5	2:48	9:52	16:03	20:50
			−0.3	1.9	0.7	1.7
	S	6	3:40	10:46	17:07	21:53
			−0.2	1.8	0.7	1.6
	M	7	4:38	11:40	18:09	23:07
			−0.1	1.8	0.7	1.6
P	Tu	8	5:41	12:31	19:07	. . .
			0.0	1.7	0.6	. . .
E	W	9	0:25	6:45	13:18	19:55
			1.7	0.1	1.7	0.4
●	Th	10	1:43	7:52	14:03	20:42
			1.7	0.2	1.7	0.2
	F	11	2:52	8:54	14:50	21:28
			1.8	0.2	1.7	0.1
	S	12	3:51	9:48	15:32	22:12
			1.9	0.3	1.8	−0.1
	S	13	4:42	10:40	16:08	22:53
			2.0	0.4	1.8	−0.2
	M	14	5:33	11:27	16:45	23:34
			2.0	0.5	1.8	−0.3
	Tu	15	6:20	12:15	17:23	. . .
			2.0	0.6	1.8	. . .
S	W	16	0:14	7:06	13:00	18:03
			−0.3	2.0	0.7	1.7
	Th	17	0:53	7:52	13:50	18:45
			−0.3	1.9	0.7	1.7
☽	F	18	1:34	8:35	14:48	19:27
			−0.2	1.8	0.7	1.6
A	S	19	2:15	9:18	15:40	20:15
			−0.1	1.8	0.8	1.5
	S	20	2:58	10:08	16:40	21:10
			0.0	1.7	0.7	1.4
	M	21	3:43	10.50	17:39	22:20
			0.1	1.7	0.7	1.4
	Tu	22	4:37	11:32	18:28	23:35
			0.2	1.7	0.6	1.4
	W	23	5:38	12:16	19:14	. . .
			0.3	1.7	0.5	. . .
E	Th	24	0:50	6:46	13:01	19:57
			1.5	0.4	1.7	0.3
	F	25	2:00	7:47	13:48	20:38
			1.6	0.4	1.7	0.2
○	S	26	3:00	8:45	14:30	21:17
			1.7	0.4	1.7	0.0
	S	27	3:47	9:42	15:12	21:57
			1.9	0.4	1.8	−0.2
	M	28	4:37	10:33	15:51	22:36
			2.0	0.5	1.8	−0.3
	Tu	29	5:25	11:28	16:33	23:18
			2.1	0.5	1.8	−0.4
N	W	30	6:14	12:14	17:14	. . .
			2.2	0.6	1.7	. . .
	Th	31	0:00	7:00	13:05	17:59
			−0.5	2.2	0.6	1.7

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	0:45	7:48	14:00	18:47
			−0.5	2.2	0.7	1.7
☾	S	2	1:33	8:37	14:55	19:40
			−0.4	2.1	0.7	1.7
P	S	3	2:20	9:25	15:54	20:41
			−0.3	2.0	0.7	1.6
	M	4	3:15	10:12	16:51	21:51
			−0.1	1.9	0.6	1.6
	Tu	5	4:12	10:59	17:43	23:12
			0.1	1.8	0.5	1.6
E	W	6	5:18	11:45	18:34	. . .
			0.2	1.7	0.3	. . .
	Th	7	0:33	6:30	12:33	19:24
			1.7	0.3	1.7	0.2
	F	8	1:48	7:33	13:17	20:12
			1.7	0.4	1.7	0.0
●	S	9	2:51	8:32	13:58	20:55
			1.8	0.5	1.7	−0.2
	S	10	3:45	9:26	14:41	21:38
			1.9	0.6	1.7	−0.3
	M	11	4:35	10:18	15:20	22:20
			1.9	0.7	1.7	−0.4
	Tu	12	5:20	11:05	16:02	22:58
			2.0	0.7	1.7	−0.4
S	W	13	6:02	11:45	16:43	23:38
			2.0	0.7	1.7	−0.4
	Th	14	6:43	12:35	17:30	. . .
			2.0	0.7	1.7	. . .
	F	15	0:15	7:21	13:33	18:12
			−0.3	2.0	0.7	1.6
A	S	16	0:57	8:00	14:27	19:02
			−0.2	1.9	0.7	1.5
☽	S	17	1:40	8:40	15:20	19:50
			−0.1	1.9	0.7	1.5
	M	18	2:20	9:20	16:12	21:00
			0.1	1.9	0.6	1.4
	Tu	19	3:08	10:00	16:58	22:12
			0.2	1.8	0.5	1.4
E	W	20	4:04	10:42	17:46	23:28
			0.4	1.8	0.4	1.5
	Th	21	5:07	11:26	18:32	. . .
			0.5	1.7	0.2	. . .
	F	22	0:41	6:12	12:14	19:16
			1.5	0.5	1.7	0.1
	S	23	1:48	7:20	12:58	19:59
			1.6	0.6	1.7	−0.1
	S	24	2:41	8:21	13:41	20:40
			1.8	0.6	1.7	−0.2
○	M	25	3:34	9:21	14:26	21:24
			1.9	0.7	1.7	−0.4
	Tu	26	4:24	10:16	15:12	22:06
			2.1	0.7	1.7	−0.5
N	W	27	5:11	11:10	16:00	22:49
			2.2	0.7	1.8	−0.6
P	Th	28	5:58	12:01	16:48	23:36
			2.2	0.7	1.8	−0.6
	F	29	6:43	12:54	17:40	. . .
			2.2	0.7	1.8	. . .
	S	30	0:23	7:28	13:48	18:34
			−0.5	2.1	0.6	1.7

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	1:11	8:12	14:40	19:34
			−0.3	2.1	0.6	1.7
	M	2	2:00	8:54	15:32	20:40
			−0.2	2.0	0.5	1.6
E	Tu	3	2:54	9:38	16:21	21:57
			0.0	1.9	0.4	1.6
	W	4	3:56	10:17	17:14	23:14
			0.2	1.8	0.2	1.6
	Th	5	5:00	11:01	18:02	. . .
			0.4	1.7	0.1	. . .
	F	6	0:34	6:02	11:44	18:52
			1.6	0.6	1.7	0.0
	S	7	1:44	7:06	12:26	19:38
			1.7	0.7	1.7	−0.2
	S	8	2:51	8:06	13:08	20:22
			1.7	0.8	1.7	−0.3
●	M	9	3:44	9:02	13:52	21:05
			1.7	0.9	1.7	−0.3
S	Tu	10	4:28	9:56	14:38	21:47
			1.8	0.9	1.7	−0.4
	W	11	5:00	10:46	15:22	22:26
			1.8	0.9	1.7	−0.4
	Th	12	5:38	11:28	16:11	23:05
			1.9	0.8	1.6	−0.3
	F	13	6:12	12:22	17:01	23:44
			2.0	0.7	1.6	−0.3
A	S	14	6:49	13:13	17:52	. . .
			2.0	0.7	1.6	. . .
	S	15	0:24	7:25	14:03	18:48
			−0.2	2.0	0.6	1.5
	M	16	1:06	8:02	14:47	19:48
			0.0	2.0	0.5	1.5
☽ E	Tu	17	1:54	8:40	15:30	20:51
			0.1	1.9	0.4	1.5
	W	18	2:42	9:16	16:16	22:00
			0.3	1.9	0.3	1.5
	Th	19	3:36	9:59	17:01	23:12
			0.4	1.9	0.2	1.5
	F	20	4:36	10:43	17:48	. . .
			0.5	1.8	0.1	. . .
	S	21	0:20	5:42	11:26	18:32
			1.6	0.6	1.8	−0.1
	S	22	1:20	6:51	12:11	19:19
			1.7	0.7	1.7	−0.2
	M	23	2:20	7:57	13:00	20:06
			1.8	0.8	1.7	−0.4
N ○	Tu	24	3:14	8:58	13:50	20:53
			1.9	0.8	1.7	−0.5
	W	25	4:04	9:49	14:42	21:40
			2.0	0.8	1.7	−0.6
P	Th	26	4:52	10:46	15:36	22:28
			2.1	0.8	1.7	−0.6
	F	27	5:36	11:38	16:32	23:16
			2.2	0.7	1.8	−0.5
	S	28	6:18	12:37	17:30	. . .
			2.2	0.6	1.8	. . .
	S	29	0:06	7:00	13:28	18:31
			−0.4	2.1	0.5	1.8
E	M	30	0:54	7:40	14:16	19:36
			−0.3	2.1	0.4	1.7
☾	Tu	31	1:46	8:20	15:00	20:43
			−0.1	2.0	0.2	1.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 150th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.								FEBRUARY.								MARCH.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	1:00	9:30	15:46	20:05			Th	1	3:48	11:10	17:44	22:13		P	F	1	4:18	11:00	17:32	22:30	
			5.0	1.6	3.2	2.6					5.7	0.1	4.1	2.3					5.5	0.0	4.7	2.0	
	Tu	2	2:15	10:15	16:35	21:10		P	F	2	4:31	11:31	17:55	22:48			S	2	4:38	11:15	17:35	22:52	
			5.6	0.7	3.7	2.3					6.3	−0.5	4.4	1.6					6.2	−0.6	5.1	1.0	
	W	3	3:28	10:51	17:11	21:51		○	S	3	5:01	11:53	18:11	23:17		○	S	3	5:02	11:30	17:45	23:15	
N			6.2	0.0	3.9	2.0					6.7	−0.7	4.6	1.0					6.5	−0.8	5.5	0.3	
☽ P	Th	4	4:02	11:22	17:43	22:26			S	4	5:27	12:10	18:25	23:42			M	4	5:23	11:43	17:58	23:38	
			6.6	−0.3	4.0	1.7					6.8	−0.7	4.8	0.6					6.6	−0.9	5.9	−0.2	
	F	5	4:40	11:53	18:10	22:50			M	5	5:52	12:23	18:40	. . .		E	Tu	5	5:42	11:53	18:10	23:58	
			6.8	−0.4	3.9	1.4					6.6	−0.7	5.1	. . .					6.4	−0.9	6.3	−0.5	
	S	6	5:13	12:15	18:32	23:25		E	Tu	6	0:06	6:13	12:33	18:52			W	6	5:58	12:03	18:20	. . .	
			6.8	−0.4	3.9	1.1					0.3	6.4	−0.6	5.5					6.2	−0.8	6.6	. . .	
	S	7	5:43	12:37	18:51	23:55			W	7	0:30	6:33	12:43	19:10			Th	7	0:18	6:15	12:12	18:35	
			6.7	−0.2	4.0	0.9					0.1	6.2	−0.7	6.0					−0.6	6.0	−0.8	7.0	
	M	8	6:10	12:50	19:10	. . .			Th	8	0:50	6:56	12:57	19:28			F	8	0:38	6:35	12:25	18:53	
			6.5	−0.1	4.3	. . .					0.0	6.0	−0.7	6.4					−0.6	5.8	−0.8	7.3	
	Tu	9	0:23	6:41	13:06	19:32			F	9	1:20	7:20	13:12	19:52			S	9	1:00	6:52	12:38	19:12	
			0.8	6.2	−0.1	4.7					0.2	5.7	−0.6	6.6					−0.5	5.7	−0.7	7.4	
E	W	10	0:55	7:08	13:22	20:00		☾	S	10	1:50	7:42	13:30	20:20			S	10	1:23	7:12	12:55	19:35	
			0.8	5.9	0.0	5.1					0.5	5.3	−0.3	6.6					−0.1	5.4	0.4	7.3	
☾	Th	11	1:30	7:41	13:44	20:31			S	11	2:20	8:06	13:47	20:50		☾	M	11	1:48	7:33	13:12	20:00	
			1.0	5.5	0.1	5.3					1.2	4.7	0.3	6.2					0.6	4.9	0.1	6.8	
	F	12	2:10	8:05	14:05	21:11			M	12	2:57	8:24	13:57	21:30		S	Tu	12	2:17	7:45	13:28	20:25	
			1.4	4.9	0.5	5.4					2.0	4.0	1.1	5.5					1.5	4.2	0.8	5.9	
	S	13	3:00	8:46	14:29	22:00			Tu	13	4:10	6:28	13:44	23:30		A	W	13	2:50	6:55	13:15	20:35	
			2.1	4.2	1.0	5.3					3.0	3.2	1.8	4.7					2.6	3.4	1.6	4.7	
	S	14	4:31	9:32	14:44	23:25		S	W	14	10:28	18:12	21:10	. . .			Th	14	10:12	18:04	21:35	. . .	
			2.7	3.4	1.7	5.1		A			1.9	3.7	3.4	. . .					2.0	4.0	3.5	. . .	
	M	15	8:44	11:47	14:33	. . .			Th	15	3:23	10:28	17:18	22:00			F	15	3:25	10:12	17:00	22:00	
			2.3	2.6	2.5	. . .					5.4	0.9	4.2	2.4					5.0	1.0	4.4	2.2	
	Tu	16	1:48	9:44	16:43	20:43			F	16	4:08	10:50	17:18	22:33			S	16	3:58	10:28	16:53	22:25	
			5.3	1.5	3.3	2.7					6.2	0.1	4.7	1.5					5.9	0.1	5.1	1.2	
S	W	17	3:06	10:21	16:52	21:44			S	17	4:42	11:08	17:34	23:00			S	17	4:27	10:48	17:04	22:50	
			6.0	0.7	3.9	2.2					6.8	−0.6	5.2	0.8					6.5	−0.6	5.8	0.3	
A	Th	18	3:57	10:52	17:13	22:22		●	S	18	5:10	11:35	17:48	23:25			M	18	4:53	11:08	17:18	23:15	
			6.5	0.1	4.3	1.7					7.0	−0.9	5.5	0.4					6.8	−1.0	6.2	−0.2	
●	F	19	4:37	11:22	17:35	22:58			M	19	5:37	11:55	18:05	23:45		●	Tu	19	5:18	11:25	17:34	23:35	
			6.8	−0.3	4.5	1.3					7.0	−1.1	5.8	0.0		E			6.8	−1.1	6.5	−0.6	
	S	20	5:10	11:43	18:57	23:22			Tu	20	5:58	12:12	18:20	. . .			W	20	5:40	11:42	17:48	23:58	
			7.0	−0.6	4.7	1.0					6.9	−1.1	6.0	. . .					6.6	−1.0	6.8	−0.7	
	S	21	5:39	12:10	18:17	23:45		E	W	21	0:10	6:18	12:25	18:35			Th	21	6:00	11:55	18:03	. . .	
			7.0	−0.7	4.8	0.2					−0.2	6.8	−1.0	6.3					6.2	−0.8	7.1	. . .	
	M	22	6:00	12:30	18:37	. . .			Th	22	0:30	6:37	12:42	18:53			F	22	0:15	6:18	12:06	18:20	
			6.9	−0.7	5.0	. . .					−0.3	6.4	−0.9	6.6					−0.7	5.8	−0.7	7.3	
	Tu	23	0:05	6:28	12:48	18:58			F	23	0:48	6:57	12:53	19:12			S	23	0:34	6:33	12:18	18:38	
			0.5	6.8	−0.7	5.3					−0.3	6.1	−0.7	6.9					−0.6	5.5	−0.5	7.5	
	W	24	0:31	6:58	13:07	19:20			S	24	1:10	7:13	13:05	19:35			S	24	0:53	6:47	12:30	19:00	
			0.3	6.6	−0.7	5.6					−0.1	5.6	−0.5	7.0					−0.3	5.1	−0.3	7.5	
E	Th	25	0:58	7:17	13:25	19:45			S	25	1:35	7:27	13:17	19:58			M	25	1:14	6:55	12:40	19:20	
			0.3	6.2	−0.5	5.9					0.4	5.0	0.0	6.8					0.2	4.6	0.0	7.1	
	F	26	1:26	7:41	13:44	20:13		☽	M	26	1:58	7:27	13:20	20:20		N	Tu	26	1:34	6:50	12:44	19:37	
			0.5	5.8	−0.1	6.0					1.1	4.3	0.5	6.2		☽			0.9	4.0	0.4	6.5	
☽	S	27	1:58	8:04	14:02	20:45			Tu	27	2:22	6:42	13:07	20:36			W	27	1:52	6:14	12:32	19:38	
			1.0	5.0	0.4	5.8					2.1	3.6	1.0	5.4					1.9	3.6	0.9	5.5	
	S	28	2:34	8:20	14:12	21:23		N	W	28	2:34	5:25	12:12	. . .			Th	28	1:53	5:16	11:44	. . .	
			1.7	4.1	1.0	5.5					3.3	3.6	1.2	. . .					3.0	3.6	1.2	. . .	
	M	29	3:20	7:02	13:55	22:24			Th	29	0:38	11:07	17:55	22:10		P	F	29	0:00	10:37	17:22	22:05	
			2.6	3.2	1.7	5.0					4.5	0.7	4.3	3.1					4.6	0.9	4.5	2.8	
	Tu	30	11:43	. . .	. . .	. . .											S	30	4:06	10:30	16:55	22:17	
			1.8	. . .	. . .	. . .													5.1	0.2	5.0	1.5	
N	W	31	2:00	10:53	17:52	21:30											S	31	4:23	10:40	16:57	22:38	
			4.9	0.9	3.8	3.1													5.7	−0.3	5.7	0.5	

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is 1.0 foot above the datum of soundings on the Admiralty Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height increased by 1 foot to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.), and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	4:42 6.0	10:53 −0.5	17:08 6.3	23:00 −0.2
○	Tu	2	5:00 6.0	11:06 −0.6	17:20 6.7	23:23 −0.6
	W	3	5:20 5.9	11:18 −0.6	17:32 7.0	23:42 −0.8
	Th	4	5:34 5.7	11:28 −0.5	17:46 7.3	. . . . .
	F	5	0:00 −0.8	5:50 5.5	11:40 −0.5	18:00 7.5
	S	6	0:18 −0.8	6:08 5.4	11:50 −0.4	18:18 7.7
	S	7	0:40 −0.6	6:27 5.3	12:10 −0.4	18:38 7.7
S	M	8	1:00 −0.2	6:48 5.1	12:26 −0.2	19:04 7.4
	Tu	9	1:27 0.4	7:10 4.7	12:45 0.2	19:30 6.8
☾ A	W	10	1:55 1.2	7:30 4.1	13:00 0.9	19:54 5.9
	Th	11	2:38 2.2	7:18 3.3	13:00 1.8	20:05 4.7
	F	12	9:30 2.2	17:41 4.0	21:10 3.4	. . . . .
	S	13	2:34 4.4	9:23 1.3	16:20 4.5	21:33 2.1
	S	14	3:22 5.3	9:43 0.4	16:10 5.3	22:00 1.0
	M	15	3:55 5.9	10:07 −0.2	16:22 6.1	22:30 0.1
E	Tu	16	4:25 6.2	10:30 −0.5	16:40 6.7	22:55 −0.5
●	W	17	4:53 6.1	10:48 −0.6	16:57 7.0	23:20 −0.7
	Th	18	5:17 5.8	11:06 −0.4	17:13 7.3	23:39 −0.8
	F	19	5:37 5.4	11:20 −0.2	17:30 7.4	. . . . .
	S	20	0:01 -0.7	5:55 5.0	11:36 0.0	17:48 7.5
	S	21	0:21 −0.4	6:10 4.6	11:47 0.1	18:08 7.5
N	M	22	0:41 −0.1	6:25 4.2	12:01 0.2	18:30 7.3
P	Tu	23	1:02 0.4	6:36 3.9	12:14 0.4	18:55 6.9
☽	W	24	1:25 1.0	6:35 3.5	12:22 0.8	19:18 6.2
	Th	25	1:48 1.8	6:03 3.2	12:17 1.4	19:22 5.2
	F	26	2:06 2.7	5:03 3.1	11:09 1.9	19:00 4.2
	S	27	9:28 1.5	16:26 4.3	21:15 2.6	. . . . .
	S	28	3:24 4.3	9:33 0.9	16:02 5.2	21:50 1.4
E	M	29	3:48 4.8	9:50 0.4	16:07 6.0	22:15 0.4
	Tu	30	4:10 5.1	10:09 0.1	16:28 6.7	22:39 −0.3

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	4:32 5.2	10:26 0.0	16:39 7.1	23:02 −0.6
	Th	2	4:52 5.1	10:41 0.1	16:55 7.3	23:25 −0.7
	F	3	5:10 5.0	10:55 0.2	17:12 7.5	23:42 −0.7
	S	4	5:27 4.8	11:09 0.2	17:29 7.5	. . . . .
	S	5	0:05 −0.5	5:47 4.7	11:26 0.2	17:50 7.5
S	M	6	0:26 −0.3	6:08 4.7	11:45 0.2	18:16 7.4
	Tu	7	0:51 0.0	6:33 4.5	12:05 0.3	18:44 7.1
A	W	8	1:20 0.4	7:04 4.3	12:32 0.7	19:16 6.6
☾	Th	9	1:55 1.0	7:43 3.9	12:56 1.2	19:56 5.8
	F	10	2:45 1.7	8:49 3.4	13:18 2.1	21:01 4.8
	S	11	6:01 2.3	. . . . .		
	S	12	0:00 4.1	8:01 1.7	14:53 4.3	20:52 2.3
E	M	13	2:20 4.5	8:43 1.0	15:07 5.3	21:30 1.2
	Tu	14	3:13 4.9	9:15 0.6	15:31 6.2	22:06 0.3
	W	15	3:58 5.2	9:47 0.3	15:55 6.8	22:36 −0.3
	Th	16	4:28 5.1	10:11 0.3	16:18 7.1	23:07 −0.5
●	F	17	5:58 4.8	10:33 0.5	16:41 7.3	23:33 −0.5
	S	18	5:27 4.4	10:52 0.6	17:03 7.3	23:56 −0.3
N	S	19	5:49 4.0	11:09 0.7	17:27 7.3	. . . . .
P	M	20	0:20 0.0	6:09 3.7	11:28 0.7	17:53 7.2
	Tu	21	0:42 0.3	6:29 3.5	11:47 0.8	18:22 6.9
	W	22	1:06 0.6	6:53 3.3	12:07 0.9	18:53 6.4
☽	Th	23	1:33 1.0	7:29 3.2	12:31 1.3	19:28 5.7
	F	24	2:04 1.5	8:29 3.0	12:51 2.0	20:09 4.8
	S	25	2:49 2.0	10:30 3.0	12:38 2.9	21:27 3.8
E	S	26	7:33 2.2	14:38 4.0	20:34 2.7	. . . . .
	M	27	1:20 3.4	8:15 1.7	14:48 5.1	21:14 1.6
	Tu	28	2:53 3.8	8:48 1.3	15:12 6.0	21:48 0.7
	W	29	3:35 4.2	9:19 1.0	15:38 6.7	22:18 0.1
	Th	30	4:07 4.4	9:46 0.9	16:03 7.1	22:47 −0.2
○	F	31	4:34 4.4	10:09 0.9	16:28 7.2	23:13 −0.3

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:58 4.3	10:30 0.9	16:50 7.2	23:37 −0.3
S	S	2	5:20 4.2	10:51 0.9	17:16 7.2	. . . . .
	M	3	0:00 −0.2	5:44 4.1	11:13 0.9	17:42 7.1
A	Tu	4	0:25 0.0	6:09 4.1	11:38 0.8	18:12 7.0
	W	5	0:53 0.1	6:42 4.2	12:04 0.8	18:45 6.8
	Th	6	1:23 0.3	7:20 4.2	12:37 1.0	19:22 6.4
	F	7	1:58 0.6	8:07 4.2	13:13 1.4	20:05 5.8
☾	S	8	2:41 0.9	9:00 4.1	13:59 2.0	20:59 5.0
E	S	9	3:36 1.4	10:14 4.1	15:21 2.8	22:13 4.2
	M	10	5:18 1.8	12:00 4.4	19:53 2.6	. . . . .
	Tu	11	0:30 3.7	7:16 1.8	13:40 5.1	21:01 1.6
	W	12	2:24 3.9	8:17 1.6	14:34 5.9	21:49 0.8
	Th	13	3:30 4.1	9:01 1.4	15:14 6.5	22:28 0.2
	F	14	4:22 4.1	9:38 1.3	15:50 6.9	23:05 0.1
●	S	15	5:04 4.0	10:10 1.3	16:22 7.0	23:38 −0.2
N	S	16	5:40 3.7	10:37 1.3	16:55 7.0	. . . . .
P	M	17	0:07 −0.1	6:11 3.5	11:03 1.2	17:26 6.9
	Tu	18	0:34 0.1	6:38 3.3	11:28 1.2	17:58 6.7
	W	19	0:56 0.3	7:03 3.4	11:58 1.1	18:31 6.5
	Th	20	1:16 0.4	7:31 3.6	12:30 1.2	19:04 6.1
	F	21	1:38 0.6	8:07 3.8	13:07 1.4	19:40 5.6
☽ E	S	22	2:03 0.7	8:50 4.1	13:53 1.9	20:20 4.9
	S	23	2:34 1.0	9:43 4.3	15:03 2.5	21:07 4.1
	M	24	3:11 1.5	10:57 4.5	18:53 2.9	22:20 3.4
	Tu	25	4:12 2.0	12:52 5.0	20:35 2.1	. . . . .
	W	26	0:59 3.0	7:20 2.2	14:09 5.7	21:27 1.3
	Th	27	3:08 3.3	8:30 2.0	14:59 6.3	22:07 0.7
	F	28	4:02 3.7	9:18 1.8	15:40 6.7	22:41 0.2
S ○	S	29	4:40 4.0	9:56 1.6	16:17 6.9	23:12 0.0
	S	30	5:10 4.1	10:28 1.4	16:50 6.9	23:40 −0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is 1.0 foot above the datum of soundings on the Admiralty Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height, increased by 1 foot, to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	5:38	10:56	17:20	. . .			Th	1	0:19	6:23	11:57	18:18			S	1	0:22	6:33	12:30	18:40	
			4.1	1.3	6.9	. . .					−0.6	4.9	0.5	6.7					−0.7	6.5	−0.3	6.0	
A	Tu	2	0:06	6:01	11:21	17:50			F	2	0:37	6:44	12:20	18:42			M	2	0:38	6:53	12:53	18:58	
			−0.1	4.1	1.1	6.8					−0.6	5.2	0.3	6.6					−0.6	6.8	−0.1	5.6	
	W	3	0:30	6:27	11:48	18:20		E	S	3	0:55	7:06	12:47	19:05			Tu	3	0:50	7:15	13:18	19:13	
			−0.2	4.2	0.9	6.8					−0.6	5.6	0.3	6.3					−0.3	6.8	0.3	5.1	
	Th	4	0:58	6:54	12:16	18:49			S	4	1:13	7:30	13:10	19:30		☾	W	4	1:00	7:38	13:42	19:22	
			−0.2	4.4	0.8	6.6					−0.5	5.9	0.4	5.9					0.1	6.7	1.0	4.4	
	F	5	1:17	7:25	12:48	19:21			M	5	1:33	8:00	13:44	19:55			Th	5	1:12	8:05	14:07	18:48	
			−0.2	4.7	0.8	6.4					−0.2	6.1	0.8	5.3					0.6	6.2	2.0	3.7	
	S	6	1:44	7:59	13:24	19:55		☾	Tu	6	1:52	8:30	14:18	20:18		N	F	6	1:04	8:30	14:28	17:28	
			−0.1	5.0	1.0	5.9					0.2	6.1	1.4	4.5					1.1	5.3	3.1	3.5	
E	S	7	2:12	8:38	14:05	20:32			W	7	2:08	9:07	15:00	20:15			S	7	0:18	10:45	22:48	. . .	
			0.2	5.1	1.4	5.3					0.8	5.7	2.3	3.5					1.5	4.3	1.0	. . .	
☾	M	8	2:44	9:22	14:57	21:11			Th	8	2:08	10:00	. . .	. . .			S	8	5:40	9:35	15:48	22:40	
			0.7	5.2	2.0	4.4					1.5	5.2	. . .	. . .					4.0	3.2	5.3	0.3	
	Tu	9	3:18	10:18	16:26	22:14			F	9	2:07	12:23	22:40	. . .			M	9	5:04	10:00	16:12	22:52	
			1.3	5.1	2.7	3.5					2.0	4.8	1.3	. . .					4.4	2.0	6.1	−0.3	
	W	10	4:00	11:43	20:58	. . .		N	S	10	5:50	8:45	15:22	22:53		P	Tu	10	5:08	10:28	16:37	23:10	
			2.0	5.1	2.2	. . .					3.4	3.2	5.5	0.4					4.9	1.0	6.5	−0.6	
	Th	11	1:21	6:35	13:34	22:00			S	11	5:25	9:48	16:10	23:15		●	W	11	5:20	10:53	17:00	23:22	
			2.8	2.6	5.4	1.3					3.9	2.4	6.2	−0.2					5.4	0.3	6.5	−0.7	
	F	12	4:13	8:27	14:50	22:41		P	M	12	5:35	10:26	16:44	23:38		E	Th	12	5:32	11:15	17:20	23:35	
			3.3	2.5	6.0	0.5					4.3	1.6	6.6	−0.5					5.8	−0.2	6.3	−0.7	
N	S	13	4:58	9:28	15:46	23:16		●	Tu	13	5:52	10:57	17:13	. . .			F	13	5:45	11:38	17:38	23:43	
			3.6	2.1	6.5	0.0					4.5	1.0	6.8	. . .					6.1	−0.5	6.0	−0.5	
●	S	14	5:33	10:11	16:30	23:47			W	14	0:00	6:10	11:22	17:38			S	14	5:52	12:00	17:55	23:52	
			3.8	1.8	6.7	−0.3					−0.6	4.7	0.6	6.6					6.4	−0.6	5.8	−0.5	
P	M	15	6:04	10:47	17:07	. . .			Th	15	0:10	6:22	11:48	18:00			S	15	6:12	12:20	18:12	. . .	
			3.8	1.5	6.8	. . .					−0.6	5.0	0.3	6.4					6:8	−0.5	5.6	. . .	
	Tu	16	0:13	6:29	11:17	17:38		E	F	16	0:22	6:38	12:15	18:20			M	16	0:05	6:30	12:33	18:32	
			−0.3	3.8	1.2	6.7					−0.5	5.3	0.1	6.1					−0.5	7.0	−0.3	5.4	
	W	17	0:36	6:48	11:44	18:07			S	17	0:32	6:53	12:40	18:40			Tu	17	0:20	6:50	13:05	18:50	
			−0.2	3.9	1.0	6.5					−0.4	5.7	0.0	5.8					−0.4	7.1	0.0	5.2	
	Th	18	0:50	7:09	12:15	18:34			S	18	0:42	7:12	13:04	19:04		☽	W	18	0:35	7:13	13:30	19:12	
			−0.1	4.2	0.8	6.3					−0.5	6.2	0.2	5.6					−0.2	7.0	0.6	4.8	
E	F	19	1:02	7:27	12:45	19:00			M	19	0:55	7:35	13:32	19:32		S	Th	19	0:53	7:38	13:56	19:27	
			−0.1	4.6	0.7	6.0					−0.4	6.4	0.5	5.2					0.2	6.5	1.5	4.2	
	S	20	1:17	7:50	13:18	19:29		☽	Tu	20	1:13	8:03	14:02	19:50			F	20	1:06	8:08	14:30	18:50	
			0.0	5.0	0.9	5.6					−0.2	6.5	1.1	4.7					0.9	5.7	2.5	3.4	
☽	S	21	1:34	8:19	13:56	19:58			W	21	1:30	8:35	14:37	20:12			S	21	1:03	8:43	23:53	. . .	
			0.0	5.4	1.2	5.1					0.3	6.1	1.9	4.0					1.7	4.6	2.2	. . .	
	M	22	1:55	8:53	14:40	20:30			Th	22	1:45	9:13	15:32	19:10		A	S	22	5:43	9:00	14:54	21:42	
			0.3	5.5	1.8	4.5					1.0	5.5	2.9	3.3					3.8	3.3	4.8	1.3	
	Tu	23	2:17	9:36	15:40	21:07		S	F	23	1:40	10:45	22:30	. . .			M	23	4:28	9:30	15:30	22:00	
			0.7	5.5	2.5	3.7					1.8	4.7	2.2	. . .					4.3	2.2	5.8	0.3	
	W	24	2:37	10:39	19:56	22:09			S	24	6:17	8:30	15:00	22:08			Tu	24	4:20	10:00	16:00	22:20	
			1.3	5.2	2.8	2.9					3.5	3.3	5.2	1.2					5.0	1.1	6.4	−0.4	
	Th	25	2:46	12:52	21:29	. . .		A	S	25	5:00	9:36	15:48	22:30			W	25	4:30	10:25	16:28	22:43	
			2.1	5.1	1.9	. . .					3.9	2.4	6.1	0.4					5.7	0.2	6.8	−0.8	
S	F	26	4:27	7:59	14:47	22:09			M	26	4:53	10:12	16:20	22:54		E	Th	26	4:48	10:50	16:54	23:00	
			3.0	2.9	5.7	1.1					4.6	1.5	6.7	−0.3		○			6.2	−0.4	6.8	−0.9	
	S	27	4:46	9:20	15:42	22:41			Tu	27	5:08	10:40	16:52	23:15			F	27	5:05	11:13	17:17	23:20	
			3.6	2.3	6.3	0.4					5.0	0.8	7.0	−0.7					6.6	−0.7	6.5	−0.8	
	S	28	5:03	10:07	16:25	23:10		○	W	28	5:24	11:05	17:18	23:35			S	28	5:20	11:32	17:35	23:32	
			4.1	1.8	6.7	−0.1					5.4	0.3	7.0	−0.9					6.8	−0.8	6.2	−0.7	
○ A	M	29	5:24	10:40	16:58	23:37			Th	29	5:40	11:30	17:40	23:52			S	29	5:38	11:53	17:55	23:48	
			4.4	1.3	6.9	−0.4					5.7	0.0	6.9	−0.9					7.0	−0.7	5.8	−0.5	
	Tu	30	5:46	11:08	17:28	23:58		E	F	30	5:57	11.50	18:00	. . .			M	30	5:55	12:17	18:10	. . .	
			4.6	1.0	6.9	−0.5					5.9	−0.2	6.6	. . .					7.1	−0.6	5.4	. . .	
	W	31	6:05	11:33	17:54	. . .			S	31	0:08	6:13	12:10	18:20									
			4.7	0.7	6.9	. . .					−0.8	6.2	−0.3	6.3									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is 1.0 foot above the datum of soundings on the Admiralty Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height increased by 1 foot to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminishd by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	0:00	6:14	12:33	18:25
			−0.3	7.3	−0.3	5.0
	W	2	0:10	6:35	12:58	18:47
			−0.1	7.2	0.2	4.6
N	Th	3	0:24	6:56	13:15	18:47
			0.2	6.9	0.9	4.0
☾	F	4	0:30	7:18	13:35	18:55
			0.6	6.8	1.8	3.6
	S	5	0:28	7:25	13:45	19:00
			1.1	5.4	2.9	3.5
	S	6	0:00	11:00	22:10	. . .
			1.5	4.4	1.1	. . .
	M	7	5:00	9:32	15:37	22:00
			4.3	2.8	4.9	0.5
P	Tu	8	4:27	9:48	15:55	22:13
			4.8	1.6	5.6	0.0
E	W	9	4:27	10:12	16:17	22:30
			5.6	0.5	5.9	−0.3
●	Th	10	4:37	10:35	16:37	22:43
			6.2	−0.3	6.0	−0.4
	F	11	4:50	11:00	16:57	22:55
			6.6	−0.7	5.8	−0.3
	S	12	5:05	11:22	17:12	23:07
			7.0	−0.9	5.5	−0.3
	S	13	5:20	11:40	17:30	23:20
			7.2	−0.8	5.3	−0.2
	M	14	5:35	12:00	17:45	23:30
			7.3	−0.7	5.1	−0.1
	Tu	15	5:58	12:20	18:03	23.45
			7.4	−0.4	5.0	−0.1
S	W	16	6:15	12:42	18:30	. . .
			7.3	−0.1	4.8	. . .
	Th	17	0:05	6:38	13:07	18:48
			0.1	7.1	0.5	4.5
☽	F	18	0:25	7:05	13:35	19:12
			0.5	6.6	1.2	4.0
A	S	19	0:42	7:32	14:13	19:18
			1.0	5.7	2.2	3.3
	S	20	0:48	8:00	20:32	. . .
			2.1	4.6	2.4	. . .
	M	21	5:20	8:33	14:00	20:47
			3.8	3.3	4.3	1.5
	Tu	22	3:37	9:03	14:53	21.13
			4.3	2.1	5.2	0.7
	W	23	3:32	9:35	15:30	21:40
			5.3	0.9	5.8	0.0
E	Th	24	3:48	10:03	16:00	22:03
			6.2	0.0	6.1	−0.3
	F	25	4:08	10:32	16:28	22:25
			6.8	−0.6	6.1	−0.4
○	S	26	4:28	10:58	16:53	22:45
			7.1	−0.8	5.9	−0.3
	S	27	4:47	11:20	17:17	23:00
			7.3	−0.9	5.4	−0.1
	M	28	5:06	11:42	17:35	23:15
			7.4	−0.7	5.0	0.1
	Tu	29	5:25	12:00	17:52	23:30
			7.4	−0.4	4.6	0.3
N	W	30	5:48	12:22	18:08	23:45
			7.3	−0.1	4.2	0.4
	Th	31	6:10	12:43	18:20	23:58
			7.1	0.4	3.8	0.6

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	6:34	13:05	18:23	. . .
			6.7	1.0	3.5	. . .
☾	S	2	0:08	6:58	13:30	18:00
			0.9	6.0	1.7	3.1
P	S	3	0:08	7:13	13:58	18:05
			1.5	5.1	2.5	3.0
	M	4	0:00	7:20	21:00	. . .
			1.9	4.2	1.7	. . .
	Tu	5	3:07	9:04	15:05	21:10
			4.1	2.6	4.1	1.2
E	W	6	3:33	9:25	15:25	21:26
			5.0	1.4	4.7	0.7
	Th	7	3:40	9:52	15:50	21:45
			5.9	0.4	5.0	0.4
	F	8	3:56	10:18	16:13	22:04
			6.6	−0.3	5.1	0.3
●	S	9	4:14	10:43	16:34	22:20
			7.1	−0.7	5.1	0.3
	S	10	4:32	11:05	16:53	22:35
			7.3	−0.8	4.9	0.4
	M	11	4:51	11:28	17:10	22:50
			7.4	−0.7	4.7	0.4
S	Tu	12	5:10	11:48	17:30	23:08
			7.4	−0.5	4.6	0.5
	W	13	5:30	12:08	17:50	23:28
			7.3	−0.3	4.5	0.5
	Th	14	5:55	12:34	18:17	23:50
			7.1	0.0	4.4	0.6
	F	15	6:25	13:00	18:48	. . .
			6.9	0.4	4.2	. . .
A	S	16	0:18	6:57	13:35	19:30
			0.8	6.4	0.9	4.0
☽	S	17	0:45	7:40	14:20	20:35
			1.3	5.7	1.6	3.6
	M	18	1:16	8:45	15:48	22:25
			2.1	4.7	2.2	3.4
	Tu	19	2:05	11:00	19:18	. . .
			3.0	4.0	2.0	. . .
E	W	20	1:52	8:23	13:48	20:12
			4.2	2.3	4.3	1.4
	Th	21	2:30	9:05	14:52	20:48
			5.2	1.2	4.8	0.9
	F	22	3:00	9:42	15:30	21:28
			6.1	0.3	5.1	0.6
	S	23	3:28	10:16	16:10	21:50
			6.8	−0.3	5.2	0.5
	S	24	3:55	10:47	16:40	22:16
			7.2	−0.6	5.0	0.6
○	M	25	4:22	11:15	17:10	22:40
			7.3	−0.6	4.6	0.7
	Tu	26	4:45	11:40	17:37	22:58
			7.3	−0.4	4.2	0.8
N	W	27	5:10	12:05	17:58	23:18
			7.2	−0.1	3.8	0.9
P	Th	28	5:35	12:28	18:20	23:37
			7.0	0.2	3.6	0.9
	F	29	6:05	12:50	18:45	. . .
			6.8	0.5	3.4	. . .
	S	30	0:00	6:37	13:15	19:18
			1.0	6.4	0.8	3.3

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:25	7:10	13:43	20:08
			1.3	5.7	1.3	3.3
	M	2	0:52	7:48	14:15	21:35
			1.9	4.9	1.7	3.2
E	Tu	3	1:22	8:50	15:05	. . .
			2.7	3.9	2.3	. . .
	W	4	1:44	8:13	11:20	19:45
			3.7	2.8	3.1	2.2
	Th	5	2:18	9:00	14:49	20:26
			4.8	1.8	3.5	1.8
	F	6	2:48	9:32	15:30	21:00
			5.7	0.9	3.9	1.5
	S	7	3:28	10:05	16:03	21:31
			6.4	0.2	4.2	1.3
	S	8	3:46	10:35	16:07	22:00
			6.9	−0.2	4.3	1.2
●	M	9	4:13	11:00	16:55	22:20
			7.1	−0.4	4.3	1.1
S	Tu	10	4:39	11:25	17:18	22:43
			7.1	−0.4	4.3	1.1
	W	11	5:04	11:50	17:39	23:07
			7.1	−0.3	4.2	1.0
	Th	12	5:29	12:14	18:03	23:30
			7.0	−0.1	4.2	0.9
	F	13	6:00	12:39	18:33	. . .
			6.8	0.0	4.3	. . .
A	S	14	0:00	6:32	13:06	19:06
			0.8	6.7	0.1	4.3
	S	15	0:30	7:05	13:36	19:48
			0.9	6.4	0.3	4.5
	M	16	1:05	7:47	14:12	20:37
			1.2	5.8	0.7	4.6
☽	Tu	17	1:51	8:34	14:55	21:34
E			1.7	5.2	1.1	4.5
	W	18	2:53	9:37	15:53	22:51
			2.4	4.3	1.7	4.6
	Th	19	6:58	11:18	18:00	. . .
			2.8	3.6	2.2	. . .
	F	20	0:43	8:40	14:00	19:43
			5.0	1.9	3.6	2.1
	S	21	2:08	9:33	15:24	20:43
			5.7	1.0	3.9	1.8
	S	22	2:54	10:16	16:19	21:27
			6.3	0.3	4.2	1.6
	M	23	3:35	10:52	17:00	22:05
			6.7	−0.2	4.2	1.5
N	Tu	24	4:12	11:25	17:36	22:35
○			6.9	−0.4	4.1	1.4
	W	25	4:47	11:55	18:07	23:00
			7.0	−0.4	3.9	1.2
P	Th	26	5:17	12:21	18:33	23:30
			6.9	−0.2	3.7	1.1
	F	27	5:50	12:44	18:55	23:55
			6.8	0.0	3.7	1.0
	S	28	6:20	13:00	19:20	. . .
			6.5	0.1	3.9	. . .
	S	29	0:25	6:52	13:20	19:46
			1.0	6.2	0.3	4.2
E	M	30	1:00	7:23	13:39	20:20
			1.1	5.7	0.4	4.5
☾	Tu	31	1:39	7:55	14:00	21:00
			1.5	5.1	0.7	4.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is 1.0 foot above the datum of soundings on the Admiralty Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height increased by 1 foot to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cosmopolitan Standard, 135th meridian E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:20 14.0	7:54 2.5	13:45 12.4	20:10 2.8
	Tu	2	2:15 14.7	9:01 1.9	14:33 12.9	21:16 2.2
	W	3	3:05 15.3	10:00 1.0	15:22 13.3	22:14 1.6
N	Th	4	3:51 15.8	10:50 0.1	16:11 13.8	23:04 1.1
○	F	5	4:36 16.1	11:35 —0.5	16:56 14.3	23:50 0.7
P	S	6	5:20 16.2	12:19 —0.8	17:42 14.5	. . . . .
	S	7	0:35 0.6	6:02 16.0	13:01 —0.9	18:32 14.7
	M	8	1:20 0.6	6:48 15.6	13:44 —0.7	19:20 14.7
	Tu	9	2:04 0.9	7:34 15.0	14:30 —0.2	20:11 14.3
E	W	10	2:52 1.1	8:30 14.0	15:18 0.5	21:10 13.8
☾	Th	11	3:44 1.9	9:32 12.9	16:10 1.4	22:17 13.3
	F	12	4:37 2.5	10:48 12.1	17:08 2.2	23:30 13.0
	S	13	5:44 3.1	12:07 11.7	18:14 2.9	. . . . .
	S	14	0:37 13.2	7:04 2.8	13:20 11.6	19:28 3.1
	M	15	1:37 13.4	8:22 2.7	14:21 11.6	20:38 2.8
	Tu	16	2:30 13.7	9:25 2.0	15:11 11.6	21:38 2.4
S	W	17	3:12 14.0	10:14 1.3	15:51 11.8	22:24 1.9
A	Th	18	3:54 14.2	10:54 0.8	16:20 12.1	23:04 1.7
●	F	19	4:26 14.5	11:27 0.5	16:48 12.6	23:39 1.5
	S	20	4:58 14.8	11:56 0.3	17:13 13.4	. . . . .
	S	21	0:08 1.5	5:26 15.1	12:26 0.2	17:45 14.2
	M	22	0:36 1.5	5:56 15.2	12:54 0.2	18:18 14.9
	Tu	23	1:05 1.5	6:29 15.6	13:24 0.2	18:52 15.5
	W	24	1:34 1.4	7:00 15.7	13:53 0.5	19:30 15.7
E	Th	25	2:09 1.5	7:40 15.3	14:25 0.9	20:14 15.4
	F	26	2:48 1.7	8:24 14.5	15:04 1.5	21:05 14.7
☽	S	27	3:36 2.1	9:18 13.2	15:50 2.3	22:10 13.6
	S	28	4:37 2.7	10:30 11.9	16:47 3.3	23:26 13.0
	M	29	5:53 3.2	12:05 11.2	18:08 4.0	. . . . .
	Tu	30	0:46 13.1	7:20 3.2	13:25 11.4	19:45 3.8
N	W	31	1:54 13.6	8:44 2.6	14:21 11.9	21:07 2.9

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:52 14.4	9:50 1.4	15:19 12.7	22:10 1.7
P	F	2	3:44 15.1	10:42 0.2	16:10 13.6	23:00 0.7
○	S	3	4:30 15.8	11:25 —0.8	16:53 14.5	23:43 —0.1
	S	4	5:12 16.2	12:06 —1.4	17:35 15.2	. . . . .
	M	5	0:24 —0.5	5:54 16.4	12:44 —1.7	18:16 15.7
E	Tu	6	1:03 —0.6	6:33 16.3	13:22 —1.4	18:59 15.9
	W	7	1:42 —0.3	7:14 15.8	14:00 —0.8	19:38 15.7
	Th	8	2:21 0.2	7:54 14.9	14:41 0.2	20:24 15.0
	F	9	3:06 1.1	8:41 13.6	15:25 1.4	21:17 14.0
☾	S	10	3:57 2.1	9:42 12.2	16:14 2.7	22:20 12.8
	S	11	4:50 3.1	11:04 10.9	17:18 3.8	23:40 12.2
	M	12	6:05 3.9	12:34 10.5	18:37 4.4	. . . . .
S	Tu	13	0:56 12.1	7:40 3.9	13:55 10.6	20:06 4.2
A	W	14	2:01 12.5	8:57 3.1	14:57 10.9	21:19 3.4
	Th	15	2:54 13.0	9:54 2.0	15:41 11.4	22:12 2.4
	F	16	3:36 13.6	10:35 1.1	16:11 12.1	22:50 1.6
	S	17	4:12 14.1	11:09 0.4	16:36 13.0	23:24 1.0
●	S	18	4:44 14.7	11:38 —0.1	17:00 14.0	23:53 0.7
	M	19	5:13 15.2	12:06 —0.3	17:27 15.0	. . . . .
	Tu	20	0:20 0.4	5:42 15.7	12:32 —0.4	18:00 16.0
E	W	21	0:48 0.3	6:11 16.0	12:59 —0.2	18:32 16.5
	Th	22	1:15 0.3	6:42 16.2	13:25 0.2	19:03 16.8
	F	23	1:46 0.5	7:15 15.9	13:54 0.7	19:44 16.4
	S	24	2:23 0.9	7:56 15.0	14:27 1.5	20:28 15.4
	S	25	3:08 1.7	8:43 13.7	15:10 2.5	21:24 13.9
☽	M	26	4:06 2.5	9:49 11.9	16:10 3.8	22:44 12.5
	Tu	27	5:21 3.4	11:35 10.7	17:41 4.7	. . . . .
N	W	28	0:20 12.3	6:58 3.6	13:14 10.9	19:36 4.3
	Th	29	1:41 12.9	8:30 2.8	14:22 11.7	21:02 3.0

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	2:46 13.8	9:38 1.3	15:20 12.8	22:03 1.4
	S	2	3:36 14.8	10:28 —0.1	16:05 14.0	22:50 0.1
○	S	3	4:20 15.6	11:10 —1.2	16:44 15.1	23:30 —0.8
	M	4	5:00 16.2	11:46 —1.8	17:20 16.0	. . . . .
E	Tu	5	0:06 —1.8	5:35 16.5	12:22 —1.9	17:54 16.6
	W	6	0:41 —1.8	6:11 16.4	12:56 —1.5	18:30 16.8
	Th	7	1:16 —1.0	6:46 15.9	13:30 —0.7	19:06 16.4
	F	8	1:52 —0.3	7:20 15.1	14:05 0.5	19:42 15.7
	S	9	2:31 0.7	7:57 14.0	14:43 1.8	20:25 14.5
	S	10	3:16 1.8	8:42 12.5	15:27 3.2	21:17 13.5
☾	M	11	4:10 2.9	9:50 10.9	16:26 4.4	22:32 11.7
S	Tu	12	5:16 3.9	11:37 10.0	17:45 5.1	. . . . .
A	W	13	0:07 11.8	6:43 4.4	13:14 10.1	19:24 5.0
	Th	14	1:26 11.7	8:13 3.7	14:22 11.6	20:48 4.0
	F	15	2:26 12.4	9:18 2.5	15:10 11.6	21:44 2.7
	S	16	3:10 13.2	10:02 1.4	15:41 12.6	22:25 1.6
	S	17	3:48 13.9	10:39 0.5	16:09 13.8	22:58 0.8
	M	18	4:18 14.6	11:10 —0.1	16:35 14.9	23:28 0.2
●	Tu	19	4:46 15.2	11:39 —0.4	17:06 15.9	23:56 —0.2
E	W	20	5:20 15.8	12:06 —0.4	17:37 16.7	. . . . .
	Th	21	0:26 —0.3	5:48 16.0	12:34 0.0	18:08 17.1
	F	22	0:55 —0.2	6:20 16.0	13:00 0.5	18:40 17.1
	S	23	1:28 0.2	6:53 15.7	13:30 1.2	19:17 16.5
	S	24	2:06 0.8	7:34 14.8	14:06 2.1	20:01 15.4
	M	25	2:54 1.6	8:22 13.4	14:54 3.2	20:56 13.7
N	Tu	26	3:52 2.6	9:34 11.6	16:02 4.3	22:22 12.1
☽	W	27	5:12 3.3	11:32 10.7	17:47 4.7	. . . . .
	Th	28	0:09 12.0	6:43 3.4	13:07 11.2	19:28 4.1
P	F	29	1:31 12.7	8:10 2.5	14:15 12.2	20:49 2.6
	S	30	2:34 13.7	9:15 1.0	15:07 13.5	21:46 1.0
	S	31	3:21 14.5	10:05 —0.3	15:47 14.7	22:31 —0.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 7.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Burma Standard, for the meridian 97° 30′ E: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator: A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E	M	1	4:09 15.4	10:48 −1.3	16:37 15.8	23:13 −1.2
○	Tu	2	4:45 15.8	11:26 −1.6	17:03 16.5	23:48 −1.5
	W	3	5:16 15.8	12:00 −1.3	17:32 16.8	. . . . . .
	Th	4	0:22 −1.3	5:48 15.6	12:32 0.7	18:03 16.7
	F	5	0:55 −0.8	6:18 15.2	13:05 0.3	18:20 16.4
	S	6	1:30 −0.1	6:45 14.7	13:33 1.4	19:02 15.8
	S	7	2:04 0.8	7:18 14.0	14:05 2.5	19:38 14.8
S	M	8	2:43 1.8	7:57 12.9	14:41 3.7	20:22 13.5
☾	Tu	9	3:31 2.8	8:52 11.5	15:35 4.7	21:25 11.9
A	W	10	4:38 3.6	10:35 10.2	16:57 5.3	23:10 11.0
	Th	11	5:54 4.0	12:30 10.4	18:37 5.1	. . . . .
	F	12	0:46 11.5	7:16 3.6	13:37 11.3	20:00 4.2
	S	13	1:51 12.2	8:23 2.7	14:27 12.3	21:00 2.9
	S	14	2:40 13.0	9:16 1.7	15:04 13.4	21:46 1.7
E	M	15	3:19 13.7	9:58 0.8	15:36 14.5	22:25 0.8
	Tu	16	3:53 14.3	10:36 0.3	16:10 15.5	23:00 0.2
●	W	17	4:25 14.8	11:09 0.2	16:41 16.2	23:33 −0.2
	Th	18	4:55 15.2	11:38 0.4	17:10 16.7	. . . . . .
	F	19	0:05 −0.2	5:25 15.3	12:10 0.8	17:42 16.9
	S	20	0:38 0.0	5:58 15.3	12:40 1.4	18:15 16.7
	S	21	1:15 0.4	6:33 15.0	13:15 2.1	18:56 16.1
N	M	22	1:58 1.0	7:17 14.2	13:58 2.8	19:42 15.0
P	Tu	23	2:49 1.7	8:12 13.0	14:57 3.6	20:40 13.3
☽	W	24	3:50 2.3	9:38 11.5	16:15 4.1	22:16 12.0
	Th	25	5:07 2.7	11:32 11.3	17:48 4.1	. . . . . .
	F	26	0:00 12.2	6:28 2.6	12:59 12.2	19:15 3.3
	S	27	1:20 13.0	7:43 1.8	13:56 13.3	20:25 2.0
E	S	28	2:20 13.8	8:45 0.7	14:45 14.3	21:21 0.7
	M	29	3:07 14.4	9:37 −0.1	15:25 15.2	22:10 −0.3
	Tu	30	3:44 14.6	10:20 −0.7	16:00 15.9	22:50 −0.8
MAY.						
○	W	1	4:23 14.8	11:00 1.3	16:37 16.3	23:27 −0.9
	Th	2	4:55 14.7	11:37 0.3	17:07 16.3	. . . . . .
	F	3	0:02 −0.7	5:24 14.5	12:10 0.5	17:35 16.1
	S	4	0:36 −0.3	5:52 14.2	12:42 1.3	18:08 15.8
S	S	5	1:10 0.4	6:20 13.9	13:10 2.3	18:33 15.4
	M	6	1:43 1.0	6:52 13.6	13:42 3.1	19:08 14.8
	Tu	7	2:20 1.7	7:33 13.1	14:19 3.8	19:52 13.8
A	W	8	3:05 2.3	8:27 12.3	15:10 4.3	20:47 12.6
☾	Th	9	3:57 2.9	9:45 11.3	16:17 4.6	22:08 11.6
	F	10	5:00 3.2	11:22 11.2	17:37 4.5	23:44 11.5
	S	11	6:09 3.2	12:38 12.0	18:56 4.0	. . . . . .
	S	12	0:58 12.1	7:16 2.8	13:33 13.0	20:00 3.1
E	M	13	1:52 12.7	8:15 2.3	14:18 14.0	20:57 2.2
	Tu	14	2:38 13.2	9:06 1.7	14:57 14.9	21:44 1.3
	W	15	3:15 13.7	9:52 1.3	15:35 15.5	22:26 0.7
	Th	16	3:47 14.1	10:33 1.2	16:10 16.0	23:07 0.3
●	F	17	4:28 14.4	11:08 1.3	16:45 16.3	23:46 0.2
	S	18	5:04 14.5	11:50 1.6	17:22 16.2	. . . . . .
N P	S	19	0:26 0.2	5:43 14.4	12:32 1.9	18:00 16.0
	M	20	1:10 0.4	6:29 14.1	13:18 2.3	18:44 15.4
	Tu	21	1:57 0.7	7:15 13.6	14:10 2.7	19:36 14.4
	W	22	2:50 1.1	8:20 12.8	15:12 3.0	20:42 13.2
☽	Th	23	3:48 1.5	9:46 12.2	16:17 3.1	22:10 12.5
	F	24	4:50 1.7	11:12 12.4	17:30 3.1	23:38 12.6
	S	25	6:00 1.7	12:28 13.2	18:43 2.6	. . . . . .
E	S	26	0:52 13.2	7:06 1.4	13:26 14.1	19:50 1.9
	M	27	1:51 13.6	8:08 1.0	14:15 14.8	20:51 1.1
	Tu	28	2:41 13.8	9:04 0.6	14:58 15.1	21:42 0.4
	W	29	3:20 13.7	9:53 0.4	15:36 15.4	22:27 0.0
	Th	30	4:00 13.0	10:37 0.5	16:12 15.5	23:08 0.0
○	F	31	4:30 13.3	11:17 0.9	16:45 15.4	23.45 0.1
JUNE.						
	S	1	5:00 13.1	11:55 1.5	17:15 15.2	. . . . . .
S	S	2	0:20 0.4	5:35 13.1	12:28 2.1	17:45 15.0
	M	3	0:55 0.6	6:05 13.2	13:00 2.7	18:12 14.8
A	Tu	4	1:28 1.1	6:36 13.3	13:31 3.1	18:48 14.6
	W	5	2:02 1.4	7:16 13.3	14:06 3.4	19:30 14.2
	Th	6	2:42 1.7	8:07 13.1	14:50 3.5	20:20 13.5
	F	7	3:25 2.0	9:08 12.8	15:03 3.5	21:22 12.7
☾	S	8	4:13 2.3	10:20 12.6	16:42 3.5	22:37 12.1
E	S	9	5:07 2.5	11:30 12.8	17:47 3.3	23:52 12.0
	M	10	6:06 2.7	12:33 13.4	18:53 3.3	. . . . . .
	Tu	11	1:00 12.3	7:09 2.7	13:28 14.0	19:58 2.6
	W	12	1:54 12.7	8:10 2.6	14:18 14.7	20:58 2.0
	Th	13	1:41 13.1	9:08 2.3	15:02 15.2	21:53 1.4
	F	14	3:22 13.3	10:03 2.1	15:45 15.5	22:43 0.8
●	S	15	4:03 13.6	10:54 1.9	16:27 15.7	23:30 0.4
N P	S	16	4:51 13.8	11:42 1.7	17:10 15.7	. . . . . .
	M	17	0:17 0.2	5:37 13.9	12:01 1.7	17:52 15.5
	Tu	18	1:02 0.1	6:24 13.9	13:20 1.7	18:38 15.0
	W	19	1:50 0.1	7:15 13.7	14:10 1.8	19:22 14.5
	Th	20	2:40 0.3	8:15 13.4	15:03 1.9	20:33 13.7
	F	21	3:30 0.6	9:25 13.2	15:59 2.0	21:47 13.1
☽ E	S	22	4:25 1.0	10:37 13.4	17:00 2.2	23:04 12.9
	S	23	5:24 1.3	11:47 13.6	18:04 2.4	. . . . . .
	M	24	0:17 12.9	6:27 1.6	12:49 14.1	19:10 2.2
	Tu	25	1:21 12.9	7:30 1.7	13:42 14.5	20:18 1.7
	W	26	2:17 12.9	8:32 1.7	14:31 14.7	21:17 1.3
	Th	27	3:00 12.6	9:30 1.5	15:15 14.8	22:08 0.9
	F	28	3:43 12.4	10:20 1.5	15:54 14.7	22:52 0.7
S ○	S	29	4:18 12.3	11:03 1.6	16:28 14.6	23:33 0.6
	S	30	4:48 12.3	11:42 1.8	17:01 14.5	. . . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 7.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Burma Standard, for the meridian 97° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	0:07	5:20	12:17	17:30			Th	1	0:49	6:08	13:00	18:14			S	1	1:05	6:40	13:26	18:51	
			0.6	12.6	2.1	14.5					0.4	14.3	1.6	15.1					0.9	16.5	1.0	15.7	
A	Tu	2	0:40	5:53	12:49	18:00			F	2	1:15	6:36	13:28	18:45			M	2	1:29	7:16	14:00	19:28	
			0.8	13.0	2.4	14.5					0.6	15.1	1.7	15.3					1.3	16.4	1.2	15.2	
	W	3	1:11	6:24	13:20	18:32		E	S	3	1:40	7:11	13:56	19:20			Tu	3	2:00	8:00	14:43	20:14	
			0.8	13.5	2.5	14.7					0.8	15.5	1.6	15.3					1.7	15.7	1.7	14.2	
	Th	4	1:42	7:00	13:50	19:09			S	4	2:10	7:52	14:32	20:02		☾	W	4	2:41	8:50	15:39	21:13	
			1.0	14.0	2.6	14.7					1.1	15.6	1.6	14.8					2.5	14.5	2.4	12.5	
	F	5	2:14	7:42	14:27	19:52			M	5	2:43	8:40	15:16	20:50			Th	5	3:36	10:01	16:51	22:49	
			1.2	14.3	2.5	14.4					1.5	15.2	1.8	13.9					3.5	12.9	3.1	11.0	
E	S	6	2:50	8:30	15:08	20:40		☾	Tu	6	3:24	9:36	16:10	21:52		N	F	6	5:08	11:42	18:20	. . .	
			1.3	14.3	2.4	13.9					2.0	14.3	2.2	12.6					4.5	12.2	3.4	. . .	
☾	S	7	3:30	9:27	15:56	21:38			W	7	4:18	10:44	17:16	23:16			S	7	0:46	6:54	13:12	19:49	
			1.6	14.0	2.5	13.1					2.8	13.4	2.8	11.5					11.1	4.3	12.8	2.8	
	M	8	4:13	10:29	16:51	22:46			Th	8	5:21	12:06	18:37	. . .			S	8	1:59	8:25	14:18	21:02	
			2.1	13.7	2.6	12.3					3.7	13.0	3.1	. . .					11.9	3.2	13.8	1.6	
	Tu	9	5:05	11:36	17:57	. . .		N	F	9	0:50	6:54	13:20	20:00			M	9	2:49	9:30	15:11	21:57	
			2.6	13.5	2.8	. . .					11.4	4.0	13.4	2.9					13.0	1.7	14.7	0.2	
	W	10	0:01	6:07	12:42	19:10			S	10	2:02	8:26	14:25	21:16		P	Tu	10	3:37	10:21	15:56	22:42	
			11.9	3.1	13.7	2.8					11.9	3.4	14.0	1.9					14.2	0.4	15.5	—0.8	
	Th	11	1:15	7:20	13:44	20:22			S	11	2:55	9:38	15:19	22:14		●	W	11	4:17	11:04	16:36	23:22	
			12.0	3.4	14.1	2.5					12.5	2.3	14.7	0.8					15.3	—0.6	16.0	—1.5	
	F	12	2:15	8:38	14:38	21:30		P	M	12	3:45	10:35	16:06	23:04		E	Th	12	4:58	11:44	17:13	. . .	
			12.3	3.1	14.6	1.9					13.3	1.2	15.3	—1.0					16.2	—1.1	16.3	. . .	
N	S	13	3:00	9:45	15:27	22:28		●	Tu	13	4:31	11:23	16:51	23:46			F	13	0:00	5:33	12:21	17:50	
			12.7	2.5	15.0	1.1					14.2	0.3	15.8	—1.0					—1.5	16.7	—1.2	16.1	
●	S	14	3:50	10:44	16:14	23:19			W	14	5:14	12:06	17:32	. . .			S	14	0:37	6:09	13:00	18:24	
			13.1	1.9	15.3	0.3					15.0	—0.2	16.0	. . .					—1.2	16.7	—0.8	15.6	
P	M	15	4:38	11:36	17:00	. . .		E	Th	15	0:26	5:58	12:47	18:14			S	15	1:14	6:41	13:38	18:58	
			13.6	1.3	15.5	. . .					—1.2	15.6	—0.4	16.0					—0.3	16.3	—0.1	14.9	
	Tu	16	0:04	5:28	12:22	17:45			F	16	1:06	6:38	13:28	18:52			M	16	1:50	7:19	14:20	19:35	
			—0.3	14.0	0.9	15.5					—1.2	15.8	—0.3	15.5					0.8	15.5	0.8	13.8	
	W	17	0:49	6:17	13:08	18:30			S	17	1:46	7:18	14:10	19:35			Tu	17	2:30	8:03	15:06	20:24	
			—0.6	14.5	0.6	15.5					—0.7	15.6	0.2	14.8					2.1	14.4	1.8	12.4	
	Th	18	1:32	7:02	13:52	19:18			S	18	2:27	8:03	14:54	20:22		☽	W	18	3:18	9:58	16:04	21:41	
			—0.7	14.6	0.6	15.1					—0.2	15.0	0.8	13.7					3.3	12.9	2.8	10.8	
E	F	19	2:16	7:52	14:40	20:10		☽	M	19	3:12	8:56	15:44	21:24		S	Th	19	4:24	10:22	17:13	23:40	
			—0.4	14.6	0.8	14.4					1.2	14.1	1.7	12.4					4.3	11.7	3.6	10.2	
	S	20	3:02	8:48	15:28	21:09			Tu	20	4:04	10:01	16:41	22:45			F	20	5:45	11:59	18:30	. . .	
			0.0	14.3	1.2	13.5					2.4	13.1	2.6	11.3					4.7	11.6	3.9	. . .	
☽	S	21	3:51	9:50	16:22	22:20			W	21	5:05	11:20	17:47	. . .			S	21	1:12	7:14	13:20	19:54	
			0.8	13.9	1.7	12.6					3.3	12.5	3.3	. . .		•			10.7	4.4	12.2	3.1	
	M	22	4:45	10:58	17:21	23:38		S	Th	22	0:21	6:20	12:40	19:10		A	S	22	2:12	8:28	14:16	20:56	
			1.6	13.5	2.3	12.1					11.0	3.9	12.6	3.4					11.5	3.4	13.0	2.0	
	Tu	23	5:46	12:08	18:28	. . .			F	23	1:36	7:41	13:45	20:29			M	23	2:54	9:23	15:01	21:41	
			2.3	13.5	2.7	. . .					11.1	3.7	12.9	2.7					12.3	2.2	13.6	0.9	
	W	24	0:50	6:54	13:10	19:45			S	24	2:36	8:54	14:40	21:28			Tu	24	3:27	10:05	15:37	22:19	
			11.9	2.8	13.6	2.5					11.4	3.0	13.4	1.7					13.2	1.2	14.2	0.2	
	Th	25	1:54	8:05	14:07	20:54		A	S	25	3:22	9:50	15:23	22:14			W	25	3:55	10:40	16:09	22:52	
			11.9	2.8	13.8	2.1					11.9	2.1	13.8	0.9					14.1	0.5	14.7	—0.2	
S	F	26	2:46	9:11	14:56	21:50			M	26	3:57	10:33	16:01	22:52		E	Th	26	4:25	11:11	16:35	23:21	
			11.8	2.4	14.0	1.5					12.4	1.4	14.2	0.3		○			15.2	0.2	15.0	—0.2	
	S	27	3:33	10:07	15:38	22:38			Tu	27	4:25	11:11	16:34	23:25			F	27	4:50	11:40	17:00	23:48	
			11.8	2.0	14.1	1.0					13.1	0.9	14.5	0.0					15.9	0.1	15.3	0.2	
	S	28	4:12	10:51	16:07	23:16		○	W	28	4:52	11:40	17:00	23:53			S	28	5:15	12:07	17:25	. . .	
			12.0	1.7	14.2	0.6					13.8	0.7	14.8	0.0					16.4	0.2	15.5	. . .	
○	M	29	4:42	11:29	16:50	23:50			Th	29	5:18	12:08	17:26	. . .			S	29	0:09	5:41	12:32	17:54	
A			12.4	1.5	14.3	0.4					14.8	0.7	15.2	. . .					0.7	16.8	0.4	15.7	
	Tu	30	5:10	12:02	17:18	. . .		E	F	30	0:20	5:42	12:34	17:51			M	30	0:30	6:11	13:02	18:24	
			12.9	1.5	14.5	. . .					0.1	15.5	0.8	15.4					1.3	16.9	0.8	15.6	
	W	31	0:20	5:40	12:38	17:47			S	31	0:42	6:08	13:00	18:17									
			0.4	13.7	1.5	14.7					0.5	16.1	0.9	15.7									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 7.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Burma Standard, for the meridian 97° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	0:52	6:46	13:36	19:02
			1.7	16.6	1.2	15.0
	W	2	1:28	7:28	14:23	19:48
			2.4	15.7	1.8	13.9
N	Th	3	2:12	8:20	15:23	20:50
			3.3	14.2	2.7	12.2
☾	F	4	3:21	9:32	16:40	22:48
			4.3	12.4	3.4	10.7
	S	5	5:10	11:31	18:11	. . .
			4.7	11.7	3.3	. . .
	S	6	0:44	6:56	13:06	19:46
			11.3	4.5	12.7	2.4
	M	7	1:50	8:15	14:08	20:40
			12.5	2.6	13.8	1.0
P	Tu	8	2:39	9:15	14:58	21:34
			13.9	1.0	14.8	—0.3
E	W	9	3:20	10:02	15:41	22:17
			15.1	—0.3	15.5	—1.1
●	Th	10	3:58	10:44	16:18	22:58
			16.2	—1.1	15.9	—1.4
	F	11	4:35	11:21	16:52	23:34
			16.9	—1.4	16.0	—1.2
	S	12	5:08	11:58	17:24	. . .
			17.1	—1.3	15.7	. . .
	S	13	0:09	5:40	12:34	17:56
			—0.5	16.9	—0.8	15.2
	M	14	0:42	6:10	13:10	18:26
			0.5	16.5	0.0	14.6
	Tu	15	1:15	6:41	13:48	18:58
			1.6	15.8	0.9	13.8
S	W	16	1:51	7:19	14:30	19:40
			2.8	14.7	1.9	12.7
	Th	17	2:45	8:06	15:25	20:40
			3.9	13.3	2.8	11.2
☽	F	18	3:40	9:14	16:31	22:38
			4.7	11.7	3.5	11.1
A	S	19	5:10	11:05	17:48	. . .
			5.0	11.0	3.7	. . .
	S	20	0:27	6:30	12:40	19:02
			10.6	4.7	11.7	3.3
	M	21	1:30	7:46	13:41	20:07
			11.7	3.8	12.5	2.3
	Tu	22	2:15	8:43	14:28	20:57
			12.8	2.5	13.3	1.3
	W	23	2:48	9:28	15:06	21:39
			13.8	1.4	13.9	0.6
E	Th	24	3:21	10:06	15:36	22:14
			14.9	0.6	14.3	0.3
	F	25	3:53	10:40	16:07	22:46
			15.5	0.1	14.7	0.3
○	S	26	4:20	11:11	16:34	23:15
			16.2	0.0	15.1	0.6
	S	27	4:48	11:41	17:01	23:41
			16.6	0.1	15.2	1.2
	M	28	5:17	12:12	17:30	. . .
			16.8	0.3	15.3	. . .
	Tu	29	0:06	5:49	12:47	18:04
			1.8	16.8	0.7	15.1
N	W	30	0:36	6:27	13:28	18:45
			2.4	16.3	1.2	14.5
	Th	31	1:17	7:08	14:17	19:35
			3.1	15.3	1.9	13.4
NOVEMBER.						
	F	1	2:15	8:01	15:18	20:48
			3.9	13.8	2.5	11.9
☾	S	2	3:37	9:22	16:34	22:48
			4.4	12.1	2.9	11.1
P	S	3	5:14	11:20	17:55	. . .
			4.3	11.8	2.7	. . .
	M	4	0:28	6:40	12:50	19:10
			12.0	3.5	12.8	1.9
	Tu	5	1:32	7:54	13:52	20:14
			13.4	2.3	13.7	0.9
E	W	6	2:18	8:52	14:40	21:07
			14.5	0.9	14.5	—0.1
	Th	7	3:00	9:40	15:23	21:53
			15.6	—0.3	14.9	—0.7
	F	8	3:38	10:23	15:57	22:34
			16.2	—1.0	15.0	—0.9
●	S	9	4:15	11:02	16:33	23:12
			16.3	—1.2	15.0	—0.5
	S	10	4:46	11:40	17:01	23:47
			16.7	—1.0	14.7	0.2
	M	11	5:16	12:15	17:34	. . .
			16.4	—0.5	14.4	. . .
S	Tu	12	0:22	5:46	12:50	18:08
			1.1	16.0	0.1	14.0
	W	13	0:53	6:15	13:26	18:35
			2.2	15.5	1.0	13.6
	Th	14	1:27	6:51	14:05	19:14
			3.1	14.7	1.7	13.0
	F	15	2:06	7:32	14:52	20:07
			3.9	13.8	2.4	12.1
A	S	16	3:02	8:25	15:47	21:27
			4.5	12.5	3.0	11.1
☽	S	17	4:13	9:48	16:50	23:08
			4.7	11.3	3.3	11.0
	M	18	5:30	11:31	17:58	. . .
			4.5	11.3	3.2	. . .
	Tu	19	0:28	6:43	12:47	19:03
			11.8	4.0	11.9	2.8
E	W	20	1:22	7:48	13:42	20:00
			12.9	3.1	12.6	2.2
	Th	21	2:06	8:41	14:25	20:50
			14.0	2.1	13.1	1.6
	F	22	2:40	9:27	15:02	21:34
			14.9	1.3	13.6	1.3
	S	23	3:21	10:08	15:36	22:13
			15.6	0.8	14.0	1.1
○	S	24	3:54	10:46	16:11	22:50
			16.1	0.3	14.3	1.3
	M	25	4:27	11:23	16:44	23:27
			16.4	0.2	14.5	1.6
	Tu	26	5:00	12:01	17:19	. . .
			16.4	0.2	14.6	. . .
N	W	27	0:02	5:35	12:42	17:59
			2.0	16.3	0.4	14.5
P	Th	28	0:43	6:15	13:26	18:42
			2.5	15.8	0.8	14.1
	F	29	1:33	7:00	14:16	19:37
			2.9	15.0	1.3	13.3
	S	30	2:32	7:57	15:13	20:50
			3.2	13.8	1.7	12.4
DECEMBER.						
☾	S	1	3:42	9:14	16:12	22:25
			3.4	12.5	2.0	12.0
	M	2	4:58	10:53	17:25	23:52
			3.3	12.1	2.1	12.7
E	Tu	3	6:08	12:20	18:35	. . .
			3.0	12.6	1.8	. . .
	W	4	1:00	7:20	13:27	19:40
			13.7	2.3	13.2	1.3
	Th	5	1:52	8:25	14:22	20:38
			14.7	1.3	13.7	0.8
	F	6	2:38	9:19	15:03	21:31
			15.2	0.5	13.8	0.3
	S	7	3:20	10:16	15:42	22:17
			15.6	—0.1	13.8	0.2
●	S	8	3:57	10:49	16:18	23:00
			16.0	—0.4	13.7	0.4
	M	9	4:30	11:27	16:49	23:37
			15.9	—0.4	13.5	0.9
S	Tu	10	5:02	12:03	17:18	. . .
			15.7	—0.2	13.5	. . .
	W	11	0:12	5:32	12:38	17:52
			1.5	15.4	0.2	13.5
	Th	12	0:46	6:00	13:12	18:23
			2.1	15.1	0.7	13.6
	F	13	1:17	6:33	13:47	18:58
			2.7	14.9	1.1	13.6
A	S	14	1:52	7:10	14:23	19:44
			3.1	14.4	1.6	13.3
	S	15	2:32	7:55	15:05	20:38
			3.5	13.7	2.1	12.9
	M	16	3:22	8:50	15:52	21:47
			3.7	12.7	2.5	12.4
☽	Tu	17	4:20	10:00	16:45	23:02
E			3.8	11.8	2.9	12.3
	W	18	5:25	11:26	17:45	. . .
			3.8	11.4	3.1	. . .
	Th	19	0:13	6:36	12:42	18:50
			12.8	3.5	11.7	3.2
	F	20	1:14	7:48	13:41	19:55
			13.5	3.0	12.1	2.9
	S	21	2:05	8:45	14:30	20:55
			14.2	2.3	12.6	2.5
	S	22	2:50	9:40	15:08	21:48
			14.9	1.5	13.1	2.1
	M	23	3:33	10:27	15:51	22:37
			15.4	0.8	13.5	1.7
N	Tu	24	4:12	11:10	16:32	23:22
○			15.8	0.3	13.9	1.5
	W	25	4:52	11:54	17:16	. . .
			16.0	0.0	14.3	. . .
P	Th	26	0:07	5:32	12:37	17:59
			1.5	16.0	—0.2	14.4
	F	27	0:52	6:12	13:21	18:48
			1.4	15.8	—0.1	14.4
	S	28	1:39	6:58	14:07	19:35
			1.6	15.3	0.1	14.1
	S	29	2:28	7:52	14:56	20:35
			1.7	14.4	0.6	13.7
E	M	30	3:22	8:55	15:49	21:47
			2.1	13.4	1.1	13.2
☾	Tu	31	4:22	10:12	16:47	23:02
			2.4	12.4	1.7	13.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 7.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Burma Standard, for the meridian 97° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon; for instance 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:44	10:52	16:14	23:25
			2.8	7.7	2.0	9.4
	Tu	2	7:02	11:48	19:05	. . .
			2.3	8.4	1.7	. . .
	W	3	0:08	8:57	12:34	20:00
			10.4	1.6	9.0	1.3
N	Th	4	0:50	8:44	13:15	20:47
☽ P			11.2	1.0	9.6	0.9
	F	5	1:29	9:29	13:53	21:30
			11.8	0.6	10.0	0.5
	S	6	2:06	10:10	14:30	22:13
			12.0	0.3	10.1	0.4
	S	7	2:44	10:48	15:09	22:53
			12.0	0.1	10.0	0.3
	M	8	3:22	11:28	15:52	23:32
			11.6	0.1	9.7	0.3
	Tu	9	4:08	12:07	16:38	. . .
			10.9	0.2	9.2	. . .
E	W	10	0:13	4:46	12:47	17:30
			0.6	10.1	0.3	8.7
☾	Th	11	0:55	5:32	13:31	18:26
			0.9	9.0	0.6	8.0
	F	12	1:44	6:25	14:24	20:07
			1.4	7.9	0.9	7.4
	S	13	2:47	7:40	15:31	21:26
			1.9	6.8	1.2	7.2
	S	14	4:19	9:58	16:55	22:32
			2.1	6.2	1.3	7.3
	M	15	5:45	10:55	18:06	23:22
			1.8	6.3	1.1	7.7
	Tu	16	6:52	11:46	19:06	. . .
			1.2	6.6	0.7	. . .
S	W	17	0:05	7:47	12:28	20:57
			8.3	0.7	7.2	0.5
A	Th	18	0:41	8:33	13:02	20:38
			9.0	0.3	7.8	0.4
●	F	19	1:14	9:14	13:33	21:20
			9.6	0.3	8.4	0.5
	S	20	1:45	9:51	14:03	21:57
			10.2	0.4	9.0	0.8
	S	21	2:12	10:27	14:32	22:29
			10.8	0.6	9.4	1.1
	M	22	2:44	11:57	15:03	22:55
			11.1	0.9	9.8	1.4
	Tu	23	3:14	11:21	15:38	23:13
			11.2	1.0	9.9	1.5
	W	24	3:50	11:37	16:15	23:27
			11.1	1.0	9.9	1.3
E	Th	25	4:28	11:52	16:57	23:50
			10.7	0.7	9.6	1.2
	F	26	5:09	12:15	17:43	. . .
			10.0	0.5	9.1	. . .
☽	S	27	0:28	5:58	12:49	18:35
			1.2	8.9	0.5	8.4
	S	28	1:05	6:44	13:32	19:41
			1.5	7.7	0.8	7.7
	M	29	2:57	7:56	14:27	21:38
			2.0	6.6	1.3	7.5
	Tu	30	3:04	10:28	15:36	23:03
			2.7	6.4	1.9	8.2
N	W	31	6:47	11:38	18:48	23:58
			2.2	7.2	1.6	9.3

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	7:45	12:29	19:46	. . .
			1.3	8.2	1.0	. . .
P	F	2	0:43	8:30	13:11	20:23
			10.4	0.5	9.2	0.4
○	S	3	1:24	9:12	13:50	21:17
			11.3	0.0	10.0	0.1
	S	4	2:00	9:52	14:25	21:56
			11.9	—0.2	10.6	0.0
	M	5	2:35	10:29	15:00	22:35
			12.2	—0.2	10.9	0.0
E	Tu	6	3:07	11:06	15:34	23:12
			12.0	—0.2	10.8	0.2
	W	7	3:42	11:41	16:10	23:48
			11.6	0.0	10.4	0.4
	Th	8	4:17	12:15	16:48	. . .
			10.7	0.2	9.8	. . .
	F	9	0:24	4:55	12:50	17:31
			0.8	9.6	0.4	8.9
☾	S	10	1:01	5:37	13:26	18:20
			1.2	8.3	0.8	7.8
	S	11	1:44	6:25	14:12	19:27
			1.7	6.8	1.2	6.7
	M	12	3:09	7:35	15:55	21:34
			2.2	5.5	1.7	6.1
S	Tu	13	5:14	10:20	17:35	22:53
			2.1	5.1	1.5	6.5
A	W	14	6:30	11:29	18:42	23:47
			1.4	5.7	0.9	7.3
	Th	15	7:27	12:15	19:35	. . .
			0.7	6.6	0.5	. . .
	F	16	0:29	8:12	12:52	20:20
			8.4	0.2	7.7	0.3
	S	17	1:02	8:53	13:24	21:00
			9.5	0.1	8.8	0.4
●	S	18	1:32	9:29	13:54	21:35
			10.4	0.2	9.7	0.7
	M	19	2:01	10:00	14:20	22:07
			11.2	0.5	10.5	1.1
	Tu	20	2:25	10:31	14:44	22:34
			11.7	0.8	11.0	1.4
E	W	21	2:58	10:54	15:19	22:51
			11.9	1.0	11.3	1.5
	Th	22	3:29	11:10	15:54	23:07
			11.8	0.9	11.2	1.3
	F	23	4:08	11:25	16:29	23:30
			11.2	0.6	10.7	1.1
	S	24	4:40	11:48	17:10	. . .
			10.2	0.4	9.9	. . .
	S	25	0:00	5:22	12:21	18:57
			1.1	9.0	0.4	8.9
☽	M	26	0:41	6:10	13:06	18:55
			1.4	7.5	0.8	7.7
	Tu	27	1:35	7:14	14:07	20:45
			2.0	6.1	1.4	6.9
N	W	28	2:58	10:24	15:49	22:53
			2.8	5.7	2.0	7.5
	Th	29	6:30	11:37	18:31	23:54
			1.8	6.8	1.4	8.8

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	7:30	12:27	19:29	. . .
			0.9	8.2	0.7	. . .
	S	2	0:38	8:10	13:05	20:16
			10.1	0.2	9.5	0.2
○	S	3	1:15	8:50	13:38	21:00
			11.2	—0.2	10.6	0.0
	M	4	1:47	9:30	14:10	21:38
			12.0	—0.3	11.3	0.0
E	Tu	5	2:18	10:05	14:38	22:15
			12.3	—0.2	11.7	0.2
	W	6	2:45	10:40	15:07	22:52
			12.2	0.0	11.7	0.4
	Th	7	3:14	11:13	15:38	23:25
			11.8	0.2	11.3	0.7
	F	8	3:47	11:44	16:10	23:55
			10.9	0.4	10.5	0.9
	S	9	4:22	12:13	16:49	. . .
			9.8	0.6	9.5	. . .
	S	10	0:26	5:00	12:40	17:34
			1.2	8.4	0.8	8.2
☾	M	11	0:57	5:45	13:14	18:25
			1.6	6.9	1.2	6.8
S	Tu	12	1:42	6:34	14:07	19:47
			2.1	5.4	1.7	5.7
A	W	13	4:34	9:45	16:58	22:20
			2.3	4.6	1.8	5.9
	Th	14	6:00	11:05	18:12	23:24
			1.6	5.4	1.2	6.9
	F	15	7:58	11:55	19:07	. . .
			0.8	6.7	0.8	. . .
	S	16	0:08	7:44	12:33	20:54
			8.3	0.4	8.1	0.6
	S	17	0:44	8:24	13:05	20:33
			9.6	0.3	9.5	0.7
	M	18	1:14	9:00	13:33	21:10
			10.8	0.4	10.6	0.9
●	Tu	19	1:41	9:32	14:00	21:42
P			11.6	0.7	11.5	1.3
	W	20	2:08	10:00	14:25	22:10
			12.1	1.0	12.0	1.5
	Th	21	2:32	10:25	14:55	22:32
			12.2	1.1	12.2	1.5
	F	22	3:05	10:43	15:27	22:52
			11.8	1.0	11.9	1.4
	S	23	3:39	11:08	16:08	23:17
			11.1	0.7	11.2	1.2
	S	24	4:15	11:30	16:44	23:50
			10.0	0.5	10.1	1.2
	M	25	4:57	12:09	17:30	. . .
			8.5	0.6	8.8	. . .
N	Tu	26	0:36	5:46	13:00	18:28
☽			1.5	7.0	1.0	7.5
	W	27	1:41	6:55	14:11	20:56
			2.1	5.6	1.6	6.6
	Th	28	4:41	10:25	16:43	22:47
			2.2	5.8	1.8	7.4
P	F	29	6:02	11:28	18:09	23:43
			1.3	7.1	1.1	8.7
	S	30	7:58	12:14	19:05	. . .
			0.5	8.6	0.5	. . .
	S	31	0:25	7:44	12:49	19:55
			10.0	0.0	10.0	0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	1:00	8:26	13:20	20:37
			11.0	−0.2	11.1	0.1
○	Tu	2	1:28	9:00	13:48	21:16
			11.7	−0.2	11.8	0.2
	W	3	1:54	9:40	14:14	21:55
			11.9	0.1	12.0	0.4
	Th	4	2:19	10:05	14:39	22:31
			11.8	0.3	12.0	0.7
	F	5	2:45	10:47	15:06	23:04
			11.3	0.6	11.5	0.9
	S	6	3:05	11:17	15:39	23:34
			10.6	0.8	10.7	1.1
	S	7	3:50	11:45	16:16	. . .
			9.4	0.9	9.6	. . .
S	M	8	0:01	4:30	12:10	16:58
			1.3	8.2	1.0	8.4
☾	Tu	9	0:30	5:14	12:40	17:49
			1.5	6.8	1.2	7.1
A	W	10	1:10	6:08	13:27	18:55
			1.9	5.5	1.7	6.0
	Th	11	3:46	8:53	16:59	21:34
			2.3	4.7	2.1	5.9
	F	12	5:19	10:32	17:31	22:50
			1.8	5.6	1.8	6.9
	S	13	6:19	11:24	18:31	23:36
			1.2	7.0	1.4	8.3
	S	14	7:06	12:04	19:20	. . .
			0.8	8.6	1.2	. . .
E	M	15	0:14	7:47	12:37	20:03
			9.6	0.7	10.0	1.2
	Tu	16	0:47	8:25	13:06	20:42
			10.8	0.8	11.2	1.3
●	W	17	1:16	9:00	13:34	21:17
			11.5	1.0	12.1	1.5
	Th	18	1:43	9:31	14:02	21:49
			11.9	1.2	12.5	1.6
	F	19	2:10	10:00	14:30	22:19
			11.9	1.2	12.5	1.6
	S	20	2:42	10.24	15:04	22:48
			11.4	1.1	12.1	1.5
	S	21	3:17	10:51	15:40	23:19
			10.6	0.9	11.3	1.4
N	M	22	3:56	11:27	16:28	. . .
			9.4	0.8	10.1	. . .
P	Tu	23	0:00	4:40	12:11	17:11
			1.4	8.0	0.9	8.8
☽	W	24	0:55	5:34	13:09	18:14
			1.6	6.7	1.2	7.5
	Th	25	2:23	8:38	14:30	21:02
			1.9	5.7	1.6	6.8
	F	26	4:13	10:14	16:22	22:32
			1.7	6.5	1.6	7.6
	S	27	5:27	11:10	17:40	23:25
			1.0	7.7	1.1	8.6
E	S	28	6:24	11:54	18:40	. . .
			0.4	9.0	0.6	. . .
	M	29	0:05	7:13	12:20	19:30
			9.6	0.0	10.2	0.3
	Tu	30	0:38	7:58	12:57	20:16
			10.4	−0.1	11.0	0.3

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:06	8:38	13:23	20:58
			10.9	0.0	11.6	0.4
	Th	2	1:30	9:16	13:46	21:37
			11.0	0.3	11.8	0.7
	F	3	1:55	9:52	14:11	22:15
			10.9	0.6	11.6	0.9
	S	4	2:19	10:27	14:40	22:51
			10.5	0.9	11.2	1.2
S	S	5	2:51	10:58	15:12	23:23
			9.9	1.1	10.6	1.3
	M	6	3:25	11:26	15:50	23:53
			9.0	1.2	9.7	1.5
	Tu	7	4:06	11:50	16:32	. . .
			8.0	1.2	8.7	. . .
A	W	8	0:22	4:50	12:19	17:20
			1.6	7.0	1.4	7.7
☾	Th	9	1:00	5:45	13:00	18:21
			1.8	6.1	1.7	6.8
	F	10	2:05	7:10	14:00	20:07
			2.1	5.5	2.1	6.4
	S	11	4:15	9:44	16:24	22:00
			2.1	6.1	2.3	7.1
	S	12	5:27	10:42	17:45	23:00
			1.8	7.3	2.1	8.1
E	M	13	6:20	11:28	18:42	23:40
			1.5	8.8	1.9	9.2
	Tu	14	7:07	12:04	19:30	. . .
			1.8	10.1	1.8	. . .
	W	15	0:17	7:48	12:38	20:14
			10.2	1.2	11.2	1.7
	Th	16	0:50	8:26	13:09	20:54
			10.9	1.3	12.1	1.6
●	F	17	1:19	9:03	13:38	21:32
			11.2	1.3	12.5	1.6
	S	18	1:45	9:37	14:10	22:09
			11.2	1.2	12.5	1.5
N P	S	19	2:24	10:12	14:44	22:47
			10.8	1.1	12.0	1.3
	M	20	3:00	10:48	15:28	23:27
			10.1	0.9	11.3	1.2
	Tu	21	3:43	11:29	16:07	. . .
			9.1	0.8	10.2	. . .
	W	22	0:12	4:30	12:17	17:57
			1.2	8.0	0.9	9.0
☽	Th	23	1:07	5:30	13:12	18:00
			1.3	7.0	1.1	7.9
	F	24	2:15	8:25	14:23	20:39
			1.4	6.5	1.4	7.3
	S	25	3:33	9:44	15:50	22:02
			1.3	7.1	1.5	7.6
E	S	26	4:46	10:40	17:08	22:57
			1.0	8.0	1.3	8.2
	M	27	5:48	11:26	18:12	23:40
			0.5	8.9	0.9	8.8
	Tu	28	6:41	12:02	19:07	. . .
			0.2	9.8	0.6	. . .
	W	29	0:15	7:30	12:34	19:57
			9.4	0.1	10.4	0.5
	Th	30	0:45	8:14	13:00	20:41
			9.7	0.2	10.8	0.5
○	F	31	1:11	8:56	13:25	21:22
			9.8	0.4	11.0	0.7

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:35	9:35	13:52	22:02
			9.8	0.7	11.0	0.9
S	S	2	2:02	10:11	14:20	22:39
			9.6	1.0	10.8	1.2
	M	3	2:33	10:45	14:53	23:14
			9.3	1.2	10.5	1.4
A	Tu	4	3:09	11:14	15:30	23:46
			8.9	1.3	10.0	1.5
	W	5	3:49	11:38	16:10	. . .
			8.3	1.4	9.3	. . .
	Th	6	0:13	4:32	12:00	17:57
			1.6	7.7	1.5	8.7
	F	7	0:38	5:24	13:32	17:49
			1.7	7.2	1.7	8.0
☾	S	8	1:10	6:29	13:14	18:53
			1.7	6.7	1.9	7.4
E	S	9	1:56	8:23	14:07	20:38
			1.9	6.7	2.2	7.2
	M	10	2:53	8:52	15:09	22:08
			2.0	7.4	2.6	7.6
	Tu	11	5:11	10:48	18:00	23:06
			2.0	8.4	2.5	8.4
	W	12	6:19	11:32	19:00	23:49
			1.8	9.6	2.2	9.2
	Th	13	7:11	12:12	19:50	. . .
			1.5	10.7	1.8	. . .
	F	14	0:28	8:00	12:46	20:35
			9.9	1.3	11.5	1.5
●	S	15	1:04	8:41	13:20	21:18
			10.3	1.2	12.0	1.2
N P	S	16	1:38	9:22	13:55	22:00
			10.5	1.0	12.2	1.1
	M	17	2:15	10:01	14:30	22:40
			10.4	0.8	12.0	0.9
	Tu	18	2:52	10:42	15:10	23:20
			10.1	0.7	11.5	0.9
	W	19	3:33	11:23	15:55	. . .
			9.5	0.6	10.7	. . .
	Th	20	0:04	4:22	12:08	16:41
			0.8	8.8	0.7	9.7
	F	21	0:51	5:20	12:57	17:39
			0.9	8.0	1.0	8.7
☽ E	S	22	1:46	7:32	13:56	19:14
			1.0	7.3	1.3	7.7
	S	23	2:49	9:00	15:10	21:17
			1.2	7.4	1.6	7.3
	M	24	4:00	10:04	16:32	22:25
			1.1	7.7	1.6	7.3
	Tu	25	5:11	10:55	17:45	23:14
			0.9	8.2	1.2	7.6
	W	26	6:11	11:36	18:47	23:55
			0.6	8.7	0.8	8.0
	Th	27	7:06	12:11	19:39	. . .
			0.3	9.2	0.5	. . .
	F	28	0:29	7:54	12:44	20:26
			8.4	0.2	9.7	0.3
S ○	S	29	1:00	8:38	13:12	21:08
			8.7	0.2	10.1	0.4
	S	30	1:26	9:18	13:39	21:49
			9.0	0.5	10.4	0.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	1:56	9:56	14:08	22:25			Th	1	2:44	10:38	14:55	23:03			S	1	3:25	10:44	15:38	22:55	
			9.2	0.8	10.6	0.9					10.3	1.3	11.4	1.4					11.5	1.7	11.2	1.3	
A	Tu	2	2:23	10:30	14:39	23:00			F	2	3:15	10:57	15:29	23:19			M	2	4:01	11:00	16:15	23:15	
			9.3	1.1	10.7	1.2					10.5	1.6	11.2	1.5					10.9	1.5	10.1	1.0	
	W	3	2:57	11.00	15:15	23:29		E	S	3	3:50	11:09	16:05	23:29			Tu	3	4:40	11:28	16:54	23:55	
			9.3	1.4	10.6	1.5					10.3	1.6	10.7	1.4					10.0	1.4	8.8	1.0	
	Th	4	3:33	11:21	15:52	23:52			S	4	4:30	11:26	16:43	23:49		☾	W	4	5:25	12:09	17:40	. . .	
			9.2	1.6	10.3	1.6					9.9	1.5	9.9	1.2					8.8	1.6	7.3	. . .	
	F	5	4:14	11:39	16:32	. . .			M	5	5:12	11:57	17:26	. . .			Th	5	0:36	6:19	13:05	18:41	
			8.9	1.6	9.8	. . .					9.2	1.5	8.8	. . .					1.2	7.5	2.0	5.9	
E	S	6	0:06	4:58	12:06	17:16		☾	Tu	6	0:22	6:02	12:37	18:16		N	F	6	1:41	7:48	14:32	22:09	
			1.5	8.5	1.6	9.1					1.1	8.3	1.6	7.5					1.8	6.5	2.6	5.5	
☾	S	7	0:30	5:50	12:35	18:07			W	7	1:07	7:03	13:30	19:25			S	7	3:33	10:32	18:00	23:17	
			1.4	8.0	1.7	8.3					1.2	7.4	2.1	6.3					2.1	7.1	1.8	6.8	
	M	8	1:05	6:51	13:18	19:08			Th	8	2:05	9:02	14:39	22:14			S	8	6:04	11:32	18:55	. . .	
			1.4	7.5	1.9	7.4					1.6	7.0	2.6	6.1					1.4	8.5	0.8	. . .	
	Tu	9	1:51	8:25	14:11	20:53		N	F	9	3:21	10:43	18:21	23:22		P	M	9	0:05	7:00	12:17	19:41	
			1.5	7.3	2.3	6.9					2.0	7.7	2.1	7.1					8.4	0.6	10.1	0.2	
	W	10	2:47	10:04	15:15	22:34			S	10	6:23	11:40	19:17	. . .			Tu	10	0:44	7:48	12:53	20:22	
			1.7	7.7	2.6	7.2					1.5	8.9	1.2	. . .					10.0	0.0	11.4	—0.2	
	Th	11	3:52	11:04	18:37	23:31			S	11	0:12	7:20	12:25	20:04		●	W	11	1:16	8:31	13:26	21:01	
			1.9	8.7	2.3	8.0					8.3	0.8	10.3	0.6					11.3	—0.2	12.3	—0.2	
	F	12	6:43	11:52	19:33	. . .		P	M	12	0:52	8:08	13:03	20:46		E	Th	12	1:47	9:12	13:54	21:37	
			1.6	9.7	1.7	. . .					9.6	0.4	11.5	0.2					12.2	—0.1	12.7	0.0	
N	S	13	0:17	7:37	12:34	20:22		●	Tu	13	1:28	8:51	13:39	21:25			F	13	2:15	9:50	14:22	22:13	
			8.9	1.2	10.8	1.1					10.7	0.0	12.3	0.1					12.6	0.1	12.6	0.3	
●	S	14	0:56	8:25	13:11	21:05			W	14	2:02	9:32	14:12	22:04			S	14	2:42	10:27	14:50	22:49	
			9.7	0.8	11.6	0.8					11.4	0.0	12.7	0.1					12.5	0.4	12.1	0.6	
P	M	15	1:35	9:07	13:47	21:46		E	Th	15	2:35	10:10	14:44	22:40			S	15	3:12	11:03	15:21	23:21	
			10.3	0.5	12.1	0.5					11.8	0.1	12.6	0.3					12.0	0.7	11.1	0.9	
	Tu	16	2:08	9:49	14:23	22:25			F	16	3:07	10:48	15:17	23:15			M	16	3:45	11:39	15:57	23:55	
			10.7	0.4	12.3	0.5					11.7	0.3	12.0	0.5					11.0	1.1	9.8	1.1	
	W	17	2:46	10:29	15:00	23:04			S	17	3:40	11:26	15:52	23:52			Tu	17	4:20	12:15	16:35	. . .	
			10.7	0.3	12.1	0.5					11.2	0.6	11.1	0.7					9.7	1.4	8.2	. . .	
	Th	18	3:25	11:09	15:39	23:43			S	18	4:19	12:03	16:29	. . .		☽	W	18	0:32	5:04	13:00	17:19	
			10.5	0.4	11.5	0.6					10.3	1.0	9.8	. . .					1.4	8.2	1.8	6.6	
E	F	19	4:07	11:49	16:20	. . .		☽	M	19	0:29	5:00	12:46	17:10		S	Th	19	1:23	5:55	14:28	18:17	
			10.0	0.6	10.5	. . .					1.0	9.2	1.4	8.3					1.8	6.7	2.1	5.0	
	S	20	0:23	4:53	12:33	17:06			Tu	20	1:14	5:47	13:39	18:00			F	20	3:02	7:20	16:20	22:05	
			0.7	9.2	0.9	9.4					1.3	7.8	1.8	6.6					2.0	5.4	1.9	4.7	
☽	S	21	1:08	5:49	13:22	17:55			W	21	2:16	6:52	15:12	19:16			S	21	4:43	10:21	17:37	23:07	
			0.9	8.3	1.3	8.1					1.7	6.5	2.2	5.2					1.6	5.7	1.1	5.7	
	M	22	2:00	7:23	14:26	19:12		S	Th	22	3:54	9:36	16:54	22:35		A	S	22	5:51	11:18	18:32	23:47	
			1.2	7.4	1.8	6.8					1.8	5.9	1.8	5.2					0.9	6.8	0.3	7.1	
	Tu	23	3:11	9:10	15:55	21:44			F	23	5:18	10:51	18:07	23:30			M	23	6:45	11:56	19:18	. . .	
			1.4	6.9	2.0	6.2					1.2	6.3	0.9	6.0					0.3	8.2	—0.1	. . .	
	W	24	4:33	10:20	17:20	22:57			S	24	6:22	11:40	19:00	. . .			Tu	24	0:20	7:31	12:30	20:00	
			1.3	7.0	1.6	6.3					0.5	7.3	0.1	. . .					8.6	0.0	9.6	—0.2	
	Th	25	5:45	11:15	18:28	23:42		A	S	25	0:09	7:18	12:20	19:48			W	25	0:50	8:12	13:00	20:35	
			0.9	7.4	0.9	6.8					7.0	0.0	8.4	—0.3					9.9	0.2	10.7	0.1	
S	F	26	6:45	11:56	19:22	. . .			M	26	0:41	7:58	12:50	20:25		E	Th	26	1:16	8:48	13:25	21:09	
			0.4	8.1	0.3	. . .					8.2	—0.2	9.5	—0.3		○			11.1	0.5	11.6	0.6	
	S	27	0:20	7:35	12:33	20:11			Tu	27	1:09	8:35	13:18	21:05			F	27	1:42	9:23	13:49	21:38	
			7.4	0.0	8.8	0.0					9.3	—0.1	10.6	0.0					11.9	1.0	12.0	1.1	
	S	28	0:58	8:20	13:03	20:52		○	W	28	1:36	9:13	13:45	21:38			S	28	2:05	9:52	14:15	22:03	
			8.2	—0.1	9.6	0.0					10.3	0.3	11.4	0.5					12.4	1.5	12.1	1.4	
☽	M	29	1:20	9:00	13:32	21:30			Th	29	2:02	9:46	14:09	22:08			S	29	2:31	10:13	14:40	22:18	
A			8.9	0.1	10.3	0.2					11.1	0.9	11.9	1.0					12.5	1.7	11.7	1.5	
	Tu	30	1:48	9:37	14:00	22:05		E	F	30	2:27	10:14	14:35	22:32			M	30	3:01	10:28	15:14	22:32	
			9.5	0.4	10.9	0.6					11.5	1.4	12.0	1.4					12.2	1.7	11.0	1.3	
	W	31	2:16	10:10	14:28	22:37			S	31	2:53	10:33	15:03	22:47									
			10.0	0.9	11.3	1.1					11.7	1.7	11.8	1.5									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	3:35 11.5	10:48 1.5	15:49 9.9	22:55 1.1
	W	2	4:15 10.4	11:18 1.5	16:30 8.5	23:34 1.1
N	Th	3	4:53 9.0	12:03 1.7	17:16 7.0	. . . . .
☾	F	4	0:27 1.5	5:52 7.6	13:09 2.1	18:21 5.6
	S	5	1:41 1.9	7:12 6.4	16:00 2.3	22:05 5.7
	S	6	4:08 2.0	10:20 7.0	17:30 1.4	23:07 7.2
	M	7	5:39 1.3	11:19 8.5	18:27 0.6	23:51 8.8
P	Tu	8	6:38 0.6	12:03 9.9	19:14 0.0	. . . . .
E	W	9	0:26 10.4	7:27 0.1	12:37 11.1	19:56 —0.2
●	Th	10	1:00 11.7	8:11 —0.1	13:07 11.9	20:36 —0.2
	F	11	1:28 12.4	8:58 0.0	13:35 12.1	21:14 0.1
	S	12	1:58 12.7	9:33 0.3	14:00 12.0	21:50 0.5
	S	13	2:19 12.6	10:10 0.6	14:27 11.4	22:25 0.8
	M	14	2:45 12.0	10:46 0.9	14:55 10.6	22:58 1.1
	Tu	15	3:16 11.2	11:22 1.2	15:30 9.4	23:30 1.3
S	W	16	3:53 10.0	11:57 1.4	16:09 8.1	. . . . .
	Th	17	0:04 1.5	4:33 8.6	12:38 1.8	16:53 6.7
☽	F	18	0:46 1.8	5:22 7.2	13:44 1.9	17:54 5.4
A	S	19	2:00 2.0	6:26 5.9	15:29 1.9	21:08 4.7
	S	20	3:52 2.0	9:23 5.7	16:52 1.4	22:27 5.8
	M	21	5:10 1.6	10:37 6.7	17:53 0.8	23:12 7.2
	Tu	22	6:10 1.1	11:22 8.0	18:41 0.5	23:45 8.7
E	W	23	6:54 0.8	12:00 9.3	19:24 0.4	. . . . .
	Th	24	0:21 10.2	7:45 0.8	12:30 10.4	20:03 0.6
	F	25	0:50 11.3	8:23 1.0	13:00 11.1	20:38 0.9
○	S	26	1:18 12.1	9:05 1.3	13:27 11.5	21:10 1.2
	S	27	1:43 12.6	9:33 1.6	13:53 11.5	21:38 1.5
	M	28	2:10 12.6	10:04 1.7	14:22 11.2	22:01 1.6
	Tu	29	2:40 12.3	10:31 1.7	14:54 10.5	22:25 1.4
N	W	30	3:15 11.6	10:54 1.6	15:32 9.5	22:58 1.3
	Th	31	3:58 10.5	11:35 1.6	16:15 8.2	23:40 1.3
NOVEMBER.						
	F	1	4:40 9.3	12:26 1.6	17:07 7.0	. . . . .
☾	S	2	0:36 1.5	5:36 8.0	13:39 1.8	18:19 5.9
P	S	3	1:49 1.8	6:57 6.9	15:25 1.7	21:43 6.4
	M	4	3:35 1.9	9:54 7.3	16:49 1.2	22:44 7.7
	Tu	5	5:07 1.4	10:56 8.3	17:51 0.6	23:29 9.0
E	W	6	6:10 0.9	11:43 9.3	18:43 0.2	. . . . .
	Th	7	0:06 10.3	7:05 0.4	12:17 10.2	19:29 0.0
	F	8	0:38 11.3	7:53 0.3	12:49 10.7	20:10 0.0
●	S	9	1:06 11.9	8:37 0.3	13:15 10.9	20:53 0.3
	S	10	1:32 12.1	9:19 0.5	13:40 10.7	21:32 0.6
	M	11	1:57 11.9	9:58 0.7	14:06 10.3	22:09 1.0
S	Tu	12	2:24 11.6	10:36 0.9	14:35 9.7	22:44 1.2
	W	13	2:55 10.9	11:15 1.2	15:10 9.0	23:17 1.3
	Th	14	3:31 10.1	11:49 1.3	15:51 8.0	23:49 1.5
	F	15	4:13 9.0	12:26 1.4	16:34 7.1	. . . . .
A	S	16	0:23 1.6	5:00 8.0	13:10 1.6	17:28 6.3
☽	S	17	1:04 1.8	5:56 7.1	14:13 1.7	18:48 5.7
	M	18	2:07 2.1	7:17 6.5	15:38 1.8	21:20 6.1
	Tu	19	4:00 2.3	9:30 6.7	16:55 1.6	22:23 7.2
E	W	20	5:21 2.1	10:34 7.5	17:54 1.3	23:09 8.5
	Th	21	6:22 1.9	11:21 8.5	18:43 1.2	23:48 9.8
	F	22	7:15 1.7	12:00 9.4	19:28 1.2	. . . . .
	S	23	0:21 10.8	8:00 1.6	12:35 10.1	20:09 1.3
○	S	24	0:55 11.7	8:40 1.6	13:05 10.5	20:47 1.4
	M	25	1:23 12.2	9:20 1.6	13:35 10.6	21:21 1.6
	Tu	26	1:53 12.3	9:57 1.5	14:08 10.4	21:55 1.4
N	W	27	2:26 12.1	10:34 1.4	14:42 10.0	22:30 1.3
P	Th	28	3:02 11.6	11:10 1.3	15:24 9.3	23:07 1.1
	F	29	3:45 10.8	11:52 1.2	16:09 8.5	23:50 1.1
	S	30	4:31 9.8	12:38 1.1	17:04 7.6	. . . . .
DECEMBER.						
☾	S	1	0:39 1.2	5:26 8.8	13:33 1.2	18:34 6.9
	M	2	1:40 1.5	6:40 7.8	14:42 1.2	21:02 7.2
E	Tu	3	2:52 1.7	9:09 7.5	16:00 1.1	22:07 7.9
	W	4	4:26 1.7	10:20 7.8	17:10 0.9	22:52 8.7
	Th	5	5:41 1.3	11:14 8.3	18:10 0.5	23:42 9.5
	F	6	6:42 0.9	11:55 8.8	19:05 0.4	. . . . .
	S	7	0:17 10.2	7:36 0.6	12:30 9.1	19:52 0.3
●	S	8	0:47 10.6	8:29 0.4	13:00 9.3	20:37 0.4
	M	9	1:15 10.9	9:07 0.4	13:27 9.3	21:18 0.6
S	Tu	10	1:41 10.9	9:50 0.6	13:55 9.2	21:57 0.8
	W	11	2:09 10.8	10:28 0.7	14:29 9.0	22:34 1.1
	Th	12	2:40 10.6	11:04 0.9	14:57 8.8	23:06 1.2
	F	13	3:16 10.3	11:38 1.0	15:35 8.4	23:36 1.3
A	S	14	3:56 9.8	12:10 1.1	16:20 8.0	. . . . .
	S	15	0:00 1.4	4:40 9.2	12:37 1.2	17:09 7.6
	M	16	0:27 1.6	5:28 8.5	13:02 1.2	18:07 7.2
☽ E	Tu	17	1:00 1.8	6:22 7.8	13:34 1.4	19:32 7.0
	W	18	1:41 2.1	7:29 7.2	14:15 1.5	21:09 7.2
	Th	19	2:32 2.5	9:17 7.0	15:05 1.8	22:18 7.9
	F	20	3:34 2.9	10:35 7.4	16:04 2.0	23:10 8.8
	S	21	6:45 2.5	11:28 8.1	18:52 1.8	23:53 9.8
	S	22	7:39 2.1	12:12 8.7	19:43 1.6	. . . . .
	M	23	0:31 10.7	8:26 1.7	12:50 9.3	20:28 1.4
N ○	Tu	24	1:06 11.4	9:09 1.3	13:26 9.8	21:10 1.2
	W	25	1:41 11.9	9:48 1.1	14:02 10.0	21:48 1.0
P	Th	26	2:19 12.0	10:28 0.8	14:39 10.0	22:25 0.8
	F	27	2:55 11.9	11:07 0.7	15:21 9.8	23:04 0.7
	S	28	3:38 11.4	11:43 0.5	16:07 9.3	23:44 0.7
	S	29	4:21 10.7	12:24 0.5	17:00 8.8	. . . . .
E	M	30	0:27 0.8	5:12 9.7	13:07 0.6	18:08 8.2
☾	Tu	31	1:17 1.1	6:08 8.7	14:00 0.8	19:55 7.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	5:07 2.3	11:35 0.2	18:29 2.9	. . .
	Tu	2	0:57 0.9	6:18 2.3	12:30 0.0	19:23 3.2
	W	3	1:48 0.6	7:19 2.5	13:21 —0.2	20:11 3.4
N ○ P	Th	4	2:34 0.3	8:13 2.6	14:08 —0.3	20:56 3.6
	F	5	3:19 0.1	9:05 2.7	14:54 —0.3	21:41 3.7
	S	6	4:03 0.0	9:56 2.7	15:41 —0.2	22:27 3.7
	S	7	4:48 0.0	10:48 2.7	16:29 0.0	23:12 3.6
	M	8	5:34 0.1	11:40 2.6	17:17 0.3	. . .
	Tu	9	0:00 3.4	6:21 0.2	12:38 2.5	18:06 0.6
E	W	10	0:46 3.0	7:10 0.4	13:39 2.4	19:00 0.9
☾	Th	11	1:36 2.7	8:00 0.5	14:47 2.2	20:07 1.2
	F	12	2:30 2.3	9:00 0.7	16:11 2.2	21:40 1.3
	S	13	3:43 2.0	10:06 0.8	17:35 2.2	23:33 1.3
	S	14	5:08 1.8	11:15 0.7	18:44 2.4	. . .
	M	15	0:55 1.2	6:52 1.8	12:12 0.6	19:30 2.5
	Tu	16	1:40 1.0	7:15 1.8	13:00 0.5	20:05 2.7
S	W	17	2:12 0.8	7:54 1.9	13:34 0.3	20:36 2.8
A	Th	18	2:43 0.6	8:24 2.0	14:10 0.2	21:00 3.0
●	F	19	3:12 0.5	8:50 2.1	14:42 0.1	21:23 3.1
	S	20	3:39 0.4	9:13 2.3	15:13 0.1	21:46 3.1
	S	21	4:08 0.3	9:42 2.4	15:46 0.1	22:13 3.2
	M	22	4:37 0.3	10:15 2.5	16:16 0.2	22:40 3.2
	Tu	23	5:06 0.3	10:48 2.6	16:47 0.3	23:10 3.2
	W	24	5:34 0.3	11:26 2.6	17:21 0.5	23:41 3.1
E	Th	25	6:04 0.3	12:10 2.6	17:56 0.7	. . .
	F	26	0:18 2.9	6:39 0.3	12:56 2.5	18:36 0.9
☽	S	27	1:00 2.7	7:20 0.3	13:56 2.4	19:33 1.1
	S	28	1:49 2.4	8:10 0.4	15:15 2.4	21:04 1.3
	M	29	3:00 2.2	9:24 0.4	16:48 2.5	23:26 1.2
	Tu	30	4:35 2.0	10:52 0.4	18:09 2.7	. . .
N	W	31	0:50 0.9	6:04 2.1	12:11 0.2	19:10 3.0

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	1:44 0.6	7:14 2.3	13:18 0.0	20:00 3.4
P	F	2	2:27 0.3	8:12 2.6	14:04 —0.1	20:46 3.6
○	S	3	3:07 0.0	9:02 2.8	14:51 —0.2	21:28 3.7
	S	4	3:46 —0.1	9:48 2.9	15:35 —0.1	22:09 3.7
	M	5	4:25 —0.1	10:34 3.0	16:18 0.0	22:50 3.6
E	Tu	6	5:05 —0.1	11:19 2.9	17:02 0.2	23:30 3.4
	W	7	5:43 0.1	12:05 2.8	17:45 0.5	. . .
	Th	8	0:08 3.0	6:21 0.2	12:51 2.6	18:31 0.8
	F	9	0:44 2.6	7:02 0.4	13:45 2.3	19:22 1.0
☾	S	10	1:19 2.2	7:46 0.6	14:58 2.1	20:34 1.3
	S	11	1:56 1.9	8:46 0.8	16:45 2.1	22:39 1.4
	M	12	4:06 1.6	10:12 0.9	18:18 2.2	. . .
S	Tu	13	0:46 1.5	6:08 1.6	11:45 0.8	19:15 2.4
A	W	14	1:34 1.0	7:18 1.7	12:45 0.6	19:53 2.6
	Th	15	2:03 0.7	7:52 1.8	13:29 0.5	20:20 2.8
	F	16	2:29 0.6	8:18 2.0	14:04 0.3	20:43 2.9
	S	17	2:54 0.4	8:41 2.3	14:36 0.2	21:04 3.1
●	S	18	3:17 0.3	9:03 2.5	15:05 0.2	21:24 3.2
	M	19	3:43 0.2	9:29 2.7	15:34 0.2	21:47 3.3
	Tu	20	4:07 0.1	9:57 2.8	16:01 0.2	22:13 3.3
E	W	21	4:31 0.1	10:29 2.9	16:31 0.3	22:41 3.2
	Th	22	4:57 0.0	11:05 2.9	17:01 0.4	23:13 3.1
	F	23	5:26 0.0	11:45 2.9	17:36 0.6	23:48 2.9
	S	24	5:59 0.1	12:31 2.7	18:18 0.8	. . .
	S	25	0:27 2.6	6:38 0.2	13:25 2.6	19:11 1.0
☽	M	26	1:16 2.3	7:27 0.3	14:41 2.4	20:40 1.2
	Tu	27	2:31 2.0	8:40 0.5	16:24 2.4	23:22 1.1
N	W	28	4:27 1.8	10:28 0.6	17:54 2.6	. . .
	Th	29	0:44 0.8	6:08 2.0	12:07 0.5	18:57 3.0

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	1:33 0.5	7:15 2.3	13:11 0.3	19:46 3.4
	S	2	2:11 0.2	8:07 2.7	13:59 0.1	20:29 3.5
○	S	3	2:47 0.0	8:51 3.0	14:41 0.0	21:07 3.6
	M	4	3:20 —0.2	9:32 3.1	15:21 0.0	21:45 3.6
E	Tu	5	3:53 —0.2	10:11 3.2	16:00 0.1	22:21 3.4
	W	6	4:27 —0.1	10:50 3.1	16:39 0.2	22:55 3.2
	Th	7	5:01 0.0	11:29 3.0	17:19 0.4	23:27 2.8
	F	8	5:35 0.1	12:06 2.7	18:02 0.7	23:57 2.5
	S	9	6:12 0.3	12:47 2.5	18:50 0.9	. . .
	S	10	0:23 2.1	6:51 0.5	13:43 2.2	19:54 1.2
☾	M	11	0:51 1.8	7:40 0.8	15:30 2.0	21:50 1.3
S	Tu	12	1:37 1.5	9:06 0.9	17:31 2.0	. . .
A	W	13	0:05 1.1	5:50 1.4	11:10 0.9	18:41 2.2
	Th	14	1:01 0.9	7:00 1.6	12:25 0.8	19:21 2.5
	F	15	1:31 0.7	7:35 1.9	13:11 0.6	19:46 2.7
	S	16	1:56 0.5	7:58 2.2	13:46 0.4	20:08 2.8
	S	17	2:20 0.4	8:19 2.5	14:18 0.3	20:29 3.0
	M	18	2:44 0.2	8:41 2.7	14:47 0.3	20:50 3.1
● E	Tu	19	3:06 0.1	9:06 2.9	15:15 0.3	21:15 3.2
	W	20	3:30 0.0	9:35 3.1	15:43 0.3	21:43 3.2
	Th	21	3:55 —0.1	10:09 3.2	16:18 0.3	22:14 3.1
	F	22	4:22 —0.1	10:46 3.2	16:47 0.4	22:49 2.9
	S	23	4:53 —0.1	11:28 3.0	17:25 0.6	23:27 2.7
	S	24	5:29 0.0	12:15 2.9	18:12 0.8	. . .
	M	25	0:12 2.4	6:12 0.2	13:12 2.7	19:14 1.0
N ☽	Tu	26	1:10 2.0	7:08 0.4	14:31 2.5	21:05 1.1
	W	27	2:43 1.8	8:20 0.7	16:12 2.5	23:19 0.9
	Th	28	4:46 1.8	10:30 0.8	17:36 2.7	. . .
P	F	29	0:27 0.6	6:11 2.1	12:05 0.7	18:36 2.9
	S	30	1:10 0.4	7:09 2.5	13:04 0.5	19:24 3.1
	S	31	1:45 0.1	7:54 2.8	13:47 0.3	20:04 3.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Indian Standard for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.							MAY.							JUNE.						
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	2:18 0.0	8:34 3.1	14:26 0.2	20:41 3.3	○	W	1	2:12 0.0	8:50 3.2	14:40 0.4	20:44 2.8		S	1	2:45 0.0	9:35 3.0	15:42 0.6	21:17 2.2
○	Tu	2	2:47 −0.1	9:11 3.2	15:03 0.2	21:15 3.3		Th	2	2:42 −0.1	9:28 3.2	15:18 0.4	21:12 2.7	S	S	2	3:20 0.0	10:10 2.9	16:24 0.6	21:48 2.1
	W	3	3:17 −0.2	9:45 3.3	15:39 0.2	21:47 3.1		F	3	3:12 −0.1	9:54 3.1	15:55 0.5	21:42 2.5		M	3	3:58 0.1	10:45 2.9	17:10 0.6	22:26 2.0
	Th	4	3:49 −0.1	10:19 3.2	16:16 0.3	22:17 2.9		S	4	3:46 0.0	10:26 3.0	16:36 0.5	22:10 2.3	A	Tu	4	4:37 0.3	11:23 2.8	18:00 0.7	23:12 2.0
	F	5	4:21 −0.1	10:53 3.0	16:55 0.5	22:46 2.6	S	S	5	4:20 0.1	11:00 2.8	17:24 0.7	22:44 2.1		W	5	5:24 0.4	12:06 2.7	18:50 0.7	. . . . .
	S	6	4:55 0.1	11:29 2.8	17:38 0.6	23:14 2.8		M	6	5:00 0.2	11:42 2.7	18:15 0.8	23:24 1.9		Th	6	0:04 1.9	6:12 0.6	12:50 2.6	19:43 0.8
	S	7	5:30 0.3	12:07 2.6	18:29 0.8	23:45 2.0		Tu	7	5:41 0.5	12:28 2.5	19:16 0.9	. . . . .		F	7	1:00 1.9	7:07 0.8	13:40 2.6	20:35 0.8
S	M	8	6:09 0.5	12:58 2.3	19:34 1.0	. . . . .	A	W	8	0:15 1.7	6:30 0.7	13:27 2.4	20:30 1.0	☾	S	8	2:08 2.0	8:12 1.0	14:30 2.5	21:30 0.7
☾	Tu	9	0:25 1.7	6:55 0.7	14:09 2.1	21:09 1.1	☾	Th	9	1:36 1.6	7:42 0.9	14:37 2.3	21:42 0.9	E	S	9	3:20 2.0	9:28 1.1	15:20 2.5	22:18 0.6
A	W	10	1:28 1.5	8:19 0.9	16:08 2.1	22:53 1.1		F	10	3:15 1.7	9:20 1.0	15:50 2.3	22:46 0.8		M	10	4:30 2.2	10:42 1.1	16:16 2.5	23:06 0.4
	Th	11	4:55 1.5	10:22 1.0	17:30 2.2	23:57 0.9		S	11	4:50 1.8	10:44 1.1	16:50 2.4	23:34 0.7		Tu	11	5:25 2.4	11:45 1.0	17:12 2.5	23:50 0.2
	F	12	6:13 1.7	11:44 0.9	18:18 2.4	. . . . .		S	12	5:45 2.1	11:46 1.0	17:34 2.5	. . . . .		W	12	6:22 2.7	12:38 0.9	18:04 2.5	. . . . .
	S	13	0:38 0.7	6:52 2.0	12:36 0.8	18:50 2.5	E	M	13	0:12 0.5	6:26 2.4	12:35 0.8	18:13 2.6		Th	13	0:30 0.0	7:10 3.0	13:27 0.7	18:55 2.6
	S	14	1:10 0.5	7:19 2.3	13:16 0.6	19:16 2.7		Tu	14	0:45 0.2	7:02 2.7	13:15 0.7	18:50 2.7		F	14	1:12 −0.2	7:55 3.2	14:18 0.6	19:46 2.6
E	M	15	1:37 0.3	7:43 2.6	13:49 0.5	19:42 2.9		W	15	1:15 0.0	7:38 3.0	13:52 0.6	19:30 2.8	●	S	15	1:53 −0.3	8:40 3.4	15:00 0.4	20:38 2.6
	Tu	16	2:02 0.1	8:10 2.9	14:20 0.4	20:10 3.0		Th	16	1:46 −0.2	8:15 3.2	14:30 0.5	20:08 2.8	N P	S	16	2:37 −0.3	9:30 3.5	15:50 0.4	21:30 2.6
●	W	17	2:38 0.0	8:40 3.1	14:50 0.4	20:40 3.0	●	F	17	2:17 −0.3	8:55 3.3	15:10 0.5	20:50 2.8		M	17	3:23 −0.2	10:20 3.5	16:42 0.4	22:30 2.5
	Th	18	2:52 −0.2	9:14 3.4	15:24 0.4	21:14 3.0		S	18	2:58 −0.3	9:38 3.4	15:52 0.4	21:35 2.6		Tu	18	4:14 0.0	11:10 3.4	17:37 0.3	23:28 2.4
	F	19	3:21 −0.3	9:50 3.4	16:00 0.4	21:50 2.9	N P	S	19	3:32 −0.3	10:24 3.4	16:44 0.5	22:26 2.5		W	19	5:08 0.2	12:04 3.4	18:33 0.4	. . . . .
	S	20	3:53 −0.2	10:32 3.3	16:40 0.5	22:30 2.7		M	20	4:16 −0.1	11:15 3.3	17:40 0.5	23:23 2.3		Th	20	0:32 2.3	6:06 0.5	13:00 3.1	19:32 0.4
	S	21	4:30 −0.1	11:18 3.1	17:30 0.6	23:18 2.4		Tu	21	5:06 0.2	12:12 3.1	18:44 0.6	. . . . .		F	21	1:40 2.3	7:10 0.7	13:56 3.0	20:30 0.5
N	M	22	5:12 0.0	12:10 3.0	18:28 0.8	. . . . .		W	22	0:31 2.1	6:00 0.4	13:14 3.0	19:54 0.6	☽ E	S	22	2:50 2.3	8:20 1.0	14:57 2.7	21:30 0.5
P	Tu	23	0:15 2.1	6:00 0.3	13:14 2.8	19:45 0.9	☽	Th	23	1:50 2.0	7:11 0.7	14:21 2.8	21:08 0.6		S	23	4:03 2.3	9:40 1.1	15:56 2.5	22:28 0.5
☽	W	24	1:31 1.9	7:00 0.6	14:30 2.6	21:30 0.9		F	24	3:15 2.1	8:37 1.0	15:30 2.7	22:18 0.6		M	24	5:12 2.4	11:00 1.2	17:00 2.3	23:20 0.5
	Th	25	3:12 1.8	8:30 0.9	15:55 2.6	22:56 0.7		S	25	4:33 2.2	10:12 1.0	16:35 2.7	23:15 0.5		Tu	25	6:14 2.5	12:10 1.1	17:57 2.2	. . . . .
	F	26	4:50 2.0	10:32 1.0	17:10 2.7	23:55 0.5	E	S	26	5:40 2.4	11:30 1.0	17:35 2.6	. . . . .		W	26	0:05 0.4	7:04 2.6	13:03 1.0	18:47 2.2
	S	27	6:00 2.3	11:54 0.8	18:08 2.8	. . . . .		M	27	0:00 0.4	6:34 2.6	12:28 0.9	18:25 2.6		Th	27	0:45 0.3	7:47 2.7	13:46 0.9	19:30 2.1
E	S	28	0:40 0.3	6:53 2.6	12:50 0.7	18:55 2.9		Tu	28	0:37 0.3	7:20 2.8	13:14 0.8	19:07 2.6		F	28	1:20 0.3	8:25 2.8	14:24 0.8	20:04 2.1
	M	29	1:14 0.2	7:37 2.9	13:32 0.6	19:36 3.0		W	29	1:10 0.2	8:00 2.9	13:58 0.7	19:44 2.5	S ○	S	29	1:56 0.2	8:56 2.9	14:58 0.7	20:37 2.1
	Tu	30	1:45 0.0	8:15 3.1	14:08 0.5	20:12 2.9		Th	30	1:40 0.1	8:33 3.0	14:27 0.6	20:18 2.4		S	30	2:33 0.1	9:28 2.9	15:35 0.6	21:08 2.1
							○	F	31	2:15 0.0	9:05 3.0	15:05 0.6	20:44 2.3							

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0h is midnight, 12h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:08	10:00	16:12	21:40
			0.1	2.9	0.6	2.1
A	Tu	2	3:46	10:30	16:52	22:15
			0.2	3.0	0.6	2.2
	W	3	4:27	11:00	17:30	22:56
			0.3	3.0	0.6	2.2
	Th	4	5:07	11:38	18:12	23:40
			0.4	2.9	0.6	2.2
	F	5	5:46	12:13	18:50	. . .
			0.6	2.9	0.6	. . .
E	S	6	0:30	6:26	12:52	19:30
			2.2	0.7	2.8	0.6
☾	S	7	1:18	7:13	13:30	20:10
			2.2	0.9	2.7	0.5
	M	8	2:17	8:10	14:18	21:00
			2.3	1.1	2.5	0.5
	Tu	9	3:23	9:23	15:13	21:55
			2.3	1.2	2.4	0.4
	W	10	4:36	10:51	16:20	22:56
			2.4	1.2	2.3	0.3
	Th	11	5:47	12:10	17:30	23:57
			2.6	1.0	2.3	0.1
	F	12	6:48	13:12	18:38	. . .
			2.9	0.8	2.4	. . .
N	S	13	0:50	7:40	14:05	19:38
			—0.1	3.1	0.6	2.5
●	S	14	1:40	8:30	14:58	20:34
			—0.2	3.4	0.4	2.6
P	M	15	2:30	9:18	15:40	21:28
			—0.2	3.5	0.2	2.7
	Tu	16	3:20	10:06	16:27	22:22
			—0.2	3.6	0.1	2.7
	W	17	4:10	10:55	17:15	23:17
			0.0	3.6	0.1	2.7
	Th	18	5:00	11:43	18:00	. . .
			0.2	3.4	0.2	. . .
E	F	19	0:13	5:54	12:30	18:50
			2.6	0.4	3.2	0.3
	S	20	1:10	6:48	13:22	19:40
			2.5	0.7	2.9	0.4
☽	S	21	2:13	7:47	14:14	20:33
			2.4	0.9	2.6	0.6
	M	22	3:22	8:58	15:13	21:30
			2.3	1.2	2.3	0.7
	Tu	23	4:40	10:26	16:34	22:37
			2.3	1.3	2.0	0.7
	W	24	5:55	12:00	17:38	23:42
			2.3	1.2	1.9	0.6
	Th	25	6:56	13:06	18:43	. . .
			2.4	1.0	1.8	. . .
S	F	26	0:34	7:43	13:49	19:30
			0.5	2.6	0.9	1.9
	S	27	1:17	8:20	14:22	20:08
			0.4	2.7	0.7	2.0
	S	28	1:55	8:50	14:52	20:38
			0.3	2.8	0.6	2.1
○ A	M	29	2:30	9:16	15:22	21:08
			0.2	2.9	0.5	2.2
	Tu	30	3:04	9:40	15:53	21:30
			0.2	3.0	0.5	2.4
	W	31	3:38	10:05	16:24	22:00
			0.2	3.0	0.4	2.5

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:12	10:32	16:53	22:35
			0.2	3.1	0.4	2.6
	F	2	4:45	11:00	17:35	23:12
			0.3	3.1	0.4	2.6
E	S	3	5:18	11:32	17:55	23:50
			0.5	3.0	0.4	2.6
	S	4	5:50	12:06	18:28	. . .
			0.6	2.9	0.4	. . .
	M	5	0:36	6:28	12:43	19:08
			2.5	0.8	2.7	0.3
☾	Tu	6	1:26	7:15	13:30	19:50
			2.4	1.0	2.5	0.4
	W	7	2:30	8:23	14:28	20:50
			2.3	1.1	2.3	0.4
	Th	8	3:55	10:14	15:47	22.10
			2.4	1.2	2.1	0.4
N	F	9	5:28	12:00	17:17	23:35
			2.5	1.0	2.1	0.3
	S	10	6:33	13:07	18:35	. . .
			2.8	0.7	2.3	. . .
	S	11	0:44	7:30	13:55	19:38
			0.1	3.1	0.4	2.5
P	M	12	1:40	8:20	14:40	20:30
			0.0	3.4	0.2	2.8
●	Tu	13	2:28	9:05	15:20	21:20
			—0.1	3.6	0.0	3.0
	W	14	3:15	9:46	16:00	22:08
			—0.1	3.7	—0.1	3.1
E	Th	15	4:00	10:30	16:40	22:53
			0.0	3.6	0.0	3.0
	F	16	4:45	11:12	17:22	23:41
			0.1	3.4	0.0	2.9
	S	17	5:30	11:55	18:04	. . .
			0.3	3.1	0.2	. . .
	S	18	0:30	6:18	12:38	18:45
			2.7	0.6	2.8	0.4
☽	M	19	1:23	7:10	13:20	19:31
			2.5	0.9	2.4	0.6
	Tu	20	2:30	8:13	14:15	20:28
			2.2	1.1	2.0	0.8
	W	21	3:59	9:54	15:51	21:49
			2.1	1.3	1.7	0.9
S	Th	22	5:37	11:59	17:41	23:26
			2.1	1.2	1.6	0.8
	F	23	6:47	13:06	18:53	. . .
			2.3	1.0	1.7	. . .
	S	24	0:33	7:33	13:41	19:36
			0.7	2.5	0.8	1.9
A	S	25	1:18	8:06	14:09	20:09
			0.5	2.7	0.6	2.1
	M	26	1:53	8:32	14:34	20:30
			0.4	2.8	0.5	2.3
	Tu	27	2:24	8:53	14:59	20:51
			0.2	2.9	0.4	2.5
○	W	28	2:55	9:13	15:28	21:14
			0.2	3.0	0.3	2.7
	Th	29	3:24	9:35	15:48	21:40
			0.2	3.1	0.2	2.8
E	F	30	3:53	9:59	16:13	22:09
			0.2	3.1	0.2	2.9
	S	31	4:21	10:25	16:39	22:42
			0.3	3.1	0.1	2.9

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:50	10:55	17:06	23:19
			0.4	3.0	0.1	2.9
	M	2	5:21	11:30	17:36	. . .
			0.5	2.8	0.1	. . .
	Tu	3	0:01	5:58	12:06	18:12
			2.7	0.7	2.6	0.2
☾	W	4	0:50	6:44	12:58	18:57
			2.6	0.9	2.3	0.3
	Th	5	1:55	7:52	13:58	20:00
			2.4	1.1	2.0	0.5
N	F	6	3:27	10:10	15:39	21:42
			2.3	1.1	1.9	0.6
	S	7	5:09	12:00	17:26	23:35
			2.5	0.9	2.0	0.5
	S	8	6:21	12:58	18:41	. . .
			2.8	0.6	2.3	. . .
	M	9	0:46	7:15	13:40	19:37
			0.3	3.1	0.2	2.7
P	Tu	10	1:36	8:01	14:17	20:23
			0.1	3.4	0.0	3.0
●	W	11	2:21	8:42	14:58	21:06
			0.0	3.6	—0.2	3.3
E	Th	12	3:02	9:22	15:28	21:46
			0.0	3.6	—0.2	3.3
	F	13	3:42	9:59	16:08	22:26
			0.0	3.5	—0.2	3.3
	S	14	4:22	10:39	16:38	23:05
			0.1	3.2	—0.1	3.1
	S	15	5:02	11:14	17:14	23:45
			0.3	2.9	0.1	2.9
	M	16	5:46	11:49	17:51	. . .
			0.6	2.5	0.3	. . .
	Tu	17	0:28	6:33	12:24	18:32
			2.6	0.8	2.1	0.6
☽	W	18	1:22	7:35	13:00	19:20
			2.3	1.1	1.8	0.8
S	Th	19	3:00	9:19	15:09	20:50
			2.0	1.2	1.5	1.0
	F	20	5:01	11:37	17:47	23:05
			2.0	1.1	1.5	1.0
	S	21	6:20	12:42	18:52	. . .
			2.2	0.9	1.8	. . .
A	S	22	0:21	7:06	13:18	19:27
			0.8	2.4	0.7	2.0
	M	23	1:05	7:36	13:39	19:51
			0.6	2.6	0.5	2.3
	Tu	24	1:39	8:00	14:03	20:11
			0.5	2.8	0.4	2.5
	W	25	2:10	8:20	14:26	20:31
			0.3	2.9	0.2	2.8
E ○	Th	26	2:37	8:39	14:49	20:52
			0.3	3.0	0.1	3.0
	F	27	3:05	9:01	15:11	21:16
			0.2	3.1	0.0	3.1
	S	28	3:31	9:25	15:34	21:46
			0.3	3.1	—0.1	3.2
	S	29	3:59	9:53	15:59	22:19
			0.3	3.0	—0.1	3.2
	M	30	4:28	10:25	16:27	22:57
			0.4	2.9	—0.1	3.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0ʰ is midnight, 12ʰ is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	5:02 0.5	11:00 2.7	16:59 0.0	23:39 2.9
	W	2	5:41 0.7	11:42 2.4	17:37 0.2	. . . . .
N	Th	3	0:30 2.7	6:34 0.9	12:35 2.1	18:24 0.4
☾	F	4	1:36 2.5	7:56 1.0	13:54 1.8	19:31 0.7
	S	5	3:12 2.4	10:21 1.0	15:58 1.8	21:38 0.9
	S	6	4:52 2.5	11:49 0.7	17:37 2.1	23:40 0.8
	M	7	6:02 2.8	12:39 0.4	18:41 2.5	. . . . .
P	Tu	8	0:43 0.5	6:55 3.0	13:18 0.1	19:28 2.9
E	W	9	1:29 0.3	7:39 3.2	13:52 −0.1	20:09 3.2
●	Th	10	2:09 0.2	8:18 3.3	14:23 −0.2	20:48 3.4
	F	11	2:46 0.1	8:55 3.3	14:54 −0.3	21:24 3.5
	S	12	3:22 0.1	9:31 3.1	15:26 −0.2	21:59 3.4
	S	13	3:59 0.2	10:03 2.9	15:58 −0.1	22:33 3.2
	M	14	4:38 0.3	10:35 2.6	16:32 0.0	23:09 3.0
	Tu	15	5:20 0.5	11:06 2.3	17:08 0.3	23:46 2.7
S	W	16	6:07 0.7	11:38 2.0	17:45 0.5	. . . . .
	Th	17	0:28 2.4	7:06 0.9	12:16 1.7	18:29 0.8
☽	F	18	1:35 2.1	8:37 1.1	13:37 1.4	19:51 1.1
A	S	19	3:45 2.0	10:30 1.0	17:13 1.5	22:15 1.1
	S	20	5:20 2.1	11:43 0.9	18:23 1.8	23:44 1.0
	M	21	6:12 2.3	12:25 0.7	18:57 2.1	. . . . .
	Tu	22	0:36 0.8	6:48 2.4	12:57 0.5	19:21 2.4
E	W	23	1:14 0.6	7:14 2.6	13:24 0.3	19:42 2.7
	Th	24	1:47 0.5	7:37 2.7	13:49 0.1	20:04 2.9
	F	25	2:16 0.4	8:00 2.8	14:12 0.0	20:28 3.2
○	S	26	2:45 0.4	8:27 2.9	14:36 −0.2	20:56 3.3
	S	27	3:13 0.3	8:56 2.9	15:01 −0.2	21:28 3.4
	M	28	3:44 0.3	9:28 2.8	15:28 −0.3	22:04 3.3
	Tu	29	4:18 0.4	10:05 2.7	16:00 −0.2	22:43 3.2
N	W	30	4:58 0.5	10:47 2.5	16:37 0.0	23:29 3.1
	Th	31	5:45 0.6	11:37 2.2	17:20 0.2	. . . . .
NOVEMBER.						
	F	1	0:22 2.9	6:47 0.8	12:40 2.0	18:12 0.6
☾	S	2	1:30 2.6	8:15 0.9	14:14 1.8	19:24 0.9
P	S	3	2:56 2.5	10:03 0.8	16:06 1.9	21:38 1.1
	M	4	4:25 2.6	11:19 0.6	17:31 2.3	23:30 1.0
	Tu	5	5:35 2.7	12:11 0.4	18:29 2.6	. . . . .
E	W	6	0:33 0.8	6:30 2.8	12:50 0.2	19:16 3.0
	Th	7	1:19 0.6	7:15 2.9	13:24 0.0	19:55 3.2
	F	8	1:59 0.4	7:55 2.9	13:55 −0.1	20:32 3.3
●	S	9	2:33 0.3	8:31 2.9	14:25 −0.2	21:05 3.4
	S	10	3:08 0.3	9:04 2.7	14:56 −0.2	21:38 3.3
	M	11	3:42 0.3	9:34 2.6	15:28 −0.1	22:10 3.2
S	Tu	12	4:20 0.4	10:05 2.4	16:02 0.0	22:43 3.0
	W	13	5:02 0.5	10:37 2.2	16:38 0.2	23:17 2.8
	Th	14	5:49 0.6	11:12 2.0	17:16 0.4	23:56 2.6
	F	15	6:43 0.8	11:56 1.8	18:01 0.7	. . . . .
A	S	16	0:45 2.4	7:50 0.9	12:59 1.6	19:01 1.0
☽	S	17	1:52 2.2	9:08 0.9	15:12 1.6	20:52 1.2
	M	18	3:20 2.6	10:22 0.9	17:07 1.8	22:40 1.2
	Tu	19	4:40 2.2	11:20 0.7	18:03 2.1	23:50 1.1
E	W	20	5:34 2.3	12:03 0.6	18:38 2.4	. . . . .
	Th	21	0:39 0.9	6:13 2.4	12:37 0.3	19:07 2.7
	F	22	1:20 0.8	6:48 2.5	13:09 0.1	19:36 3.0
	S	23	1:55 0.6	7:20 2.6	13:36 −0.1	20:05 3.2
○	S	24	2:28 0.5	7:57 2.7	14:05 −0.2	20:40 3.4
	M	25	3:00 0.4	8:33 2.7	14:36 −0.3	21:15 3.5
	Tu	26	3:36 0.3	9:15 2.6	15:11 −0.3	21:54 3.5
N	W	27	4:18 0.3	10:00 2.6	15:49 −0.2	22:38 3.4
P	Th	28	5:08 0.4	10:48 2.4	16:32 0.0	23:26 3.3
	F	29	5:54 0.5	11:46 2.2	17:20 0.3	. . . . .
	S	30	0:20 3.1	6:54 0.5	12:52 2.1	18:16 0.6
DECEMBER.						
☾	S	1	1:23 2.9	8:05 0.6	14:16 2.0	19:30 1.0
	M	2	2:32 2.7	9:22 0.6	15:50 2.1	21:22 1.2
E	Tu	3	3:50 2.5	10:36 0.6	17:10 2.3	23:11 1.2
	W	4	5:02 2.5	11:34 0.5	18:13 2.6	. . . . .
	Th	5	0:22 1.0	6:03 2.5	12:20 0.3	19:00 2.8
	F	6	1:13 0.8	6:55 2.5	13:00 0.2	19:44 3.0
	S	7	1:58 0.7	7:37 2.5	13:32 0.1	20:20 3.1
●	S	8	2:27 0.5	8:14 2.4	14:02 0.0	20:54 3.2
	M	9	3:58 0.4	8:50 2.4	14:35 −0.1	21:25 3.2
S	Tu	10	3:33 0.4	9:14 2.3	15:10 −0.1	22:56 3.1
	W	11	4:11 0.4	9:50 2.2	15:44 0.0	22:28 3.1
	Th	12	4:49 0.4	10:22 2.2	16:22 0.2	23:00 3.0
	F	13	5:30 0.5	11:00 2.1	17:00 0.4	23:35 2.8
A	S	14	6:16 0.6	11:41 2.0	17:44 0.6	. . . . .
	S	15	0:14 2.7	7:03 0.7	12:32 2.0	18:30 0.8
	M	16	0:55 2.5	7:53 0.7	13:30 1.9	19:29 1.1
☽ E	Tu	17	1:42 2.4	8:53 0.8	14:49 1.9	21:00 1.3
	W	18	2:39 2.2	9:53 0.7	16:24 2.1	22:40 1.3
	Th	19	3:47 2.2	10:51 0.6	17:31 2.3	23:56 1.2
	F	20	4:57 2.1	11:41 0.4	18:23 2.6	. . . . .
	S	21	0:51 1.0	5:55 2.2	12:23 0.2	19:07 2.8
	S	22	1:33 0.8	6:47 2.3	13:03 0.0	19:47 3.1
	M	23	2:14 0.6	7:35 2.4	13:44 −0.2	20:26 3.4
N ○	Tu	24	2:52 0.4	8:23 2.5	14:24 −0.3	21:08 3.5
	W	25	3:32 0.3	9:12 2.6	15:04 −0.3	21:50 3.6
P	Th	26	4:15 0.2	10:00 2.6	15:46 −0.2	22:34 3.6
	F	27	5:00 0.2	10:53 2.6	16:35 0.0	23:23 3.5
	S	28	5:47 0.2	11:50 2.5	17:28 0.3	. . . . .
	S	29	0:10 3.3	6:37 0.3	12:51 2.4	18:18 0.6
E	M	30	1:03 3.0	7:32 0.4	13:57 2.3	19:21 0.9
☾	Tu	31	1:58 2.7	8:33 0.5	15:16 2.3	20:43 1.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	6:45	10:55	17:00	. . .
			0.8	1.0	0.4	. . .
	Tu	2	0:50	7:30	12:50	18:18
			1.9	0.6	1.0	0.3
	W	3	1:38	8:04	13:50	19:14
			2.0	0.4	1.2	0.2
N	Th	4	2:18	8:38	14:36	20:02
P			2.2	0.2	1.3	0.1
	F	5	2:54	9:12	15:16	20:47
			2.2	0.1	1.5	0.1
	S	6	3:30	9:48	15:58	21:32
			2.2	0.0	1.6	0.1
	S	7	4:00	10:28	16:28	22:14
			2.2	0.0	1.7	0.2
	M	8	4:30	10:58	17:00	22:56
			2.1	0.0	1.7	0.4
	Tu	9	5:00	11:30	17:43	23:34
			2.0	0.0	1.7	0.5
E	W	10	5:26	12:00	18:23	. . .
			1.8	0.1	1.7	. . .
☾	Th	11	0:13	5:54	12:30	19:08
			0.7	1.6	0.2	1.6
	F	12	0:54	6:22	13:02	20:10
			0.9	1.4	0.3	1.5
	S	13	2:11	6:48	13:48	21:43
			1.0	1.2	0.4	1.5
	S	14	5:00	8:20	15:30	23:25
			0.9	1.0	0.5	1.5
	M	15	7:35	11:15	17:35	. . .
			0.7	0.8	0.5	. . .
	Tu	16	0:40	8:05	13:08	18:43
			1.6	0.5	1.0	0.4
S	W	17	1:24	8:30	13:55	19:30
			1.8	0.3	1.1	0.3
A	Th	18	2:00	8:55	14:33	20:02
			1.9	0.2	1.3	0.2
●	F	19	2:32	9:12	15:02	20:31
			2.0	0.1	1.4	0.2
	S	20	3:00	9:35	15:33	21:00
			2.1	0.1	1.5	0.1
	S	21	3:30	9:50	16:00	21:26
			2.2	0.1	1.6	0.1
	M	22	3:56	10:07	16:27	21:55
			2.2	0.0	1.7	0.1
	Tu	23	4:20	10:28	16:50	22:25
			2.1	0.0	1.7	0.2
	W	24	4:40	10:48	17:15	22:58
			2.0	0.0	1.8	0.3
E	Th	25	4:58	11:15	17:42	23:32
			1.9	0.0	1.7	0.4
	F	26	5:14	11:42	18:13	. . .
			1.7	0.0	1.7	. . .
☽	S	27	0:11	5:28	12:11	18:55
			0.6	1.6	0.1	1.6
	S	28	1:00	5:43	12:44	20:21
			0.8	1.3	0.2	1.4
	M	29	2:33	5:43	13:35	23:22
			1.0	1.1	0.4	1.5
	Tu	30	16:05	. . .	. . .	. . .
			0.6	. . .	. . .	. . .
N	W	31	0:58	8:08	13:34	18:25
			1.7	0.6	0.9	0.5

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	1:41	8:12	14:15	19:30
			1.9	0.4	1.2	0.3
P	F	2	2:18	8:37	14:48	20:17
			2.1	0.2	1.5	0.2
○	S	3	2:50	9:03	15:17	20:57
			2.2	0.0	1.7	0.1
	S	4	3:18	9:33	15:48	21:35
			2.3	−0.1	1.9	0.1
	M	5	3:45	10:00	16:15	22:10
			2.2	−0.2	2.0	0.2
E	Tu	6	4:12	10:28	16:43	22:42
			2.2	−0.2	2.0	0.3
	W	7	4:34	10:53	17:11	23:11
			2.1	−0.2	2.0	0.4
	Th	8	4:54	11:18	17:40	23:36
			1.9	−0.1	1.9	0.5
	F	9	5:21	11:41	18:12	. . .
			1.7	0.0	1.8	. . .
☾	S	10	0:00	5:38	12:00	18:51
			0.7	1.5	0.1	1.6
	S	11	0:18	5:38	12:16	19:55
			0.8	1.2	0.3	1.3
	M	12	0:46	4:46	12:26	22:19
			1.0	1.1	0.5	1.2
S	Tu	13	13:52	. . .	. . .	. . .
			0.6	. . .	. . .	. . .
A	W	14	0:52	8:28	14:03	19:14
			1.4	0.4	0.9	0.6
	Th	15	1:30	8:35	14:14	19:46
			1.6	0.3	1.2	0.4
	F	16	1:57	8:50	14:34	20:15
			1.9	0.2	1.4	0.3
	S	17	2:24	9:04	14:57	20:34
			2.0	0.1	1.6	0.2
●	S	18	2:49	9:14	15:18	20:58
			2.2	0.0	1.8	0.1
	M	19	3:15	9:25	15:43	21:22
			2.2	0.0	1.9	0.1
	Tu	20	3:38	9:40	16:05	21:45
			2.2	−0.1	2.0	0.0
E	W	21	4:02	9:58	16:26	22:14
			2.1	−0.2	2.1	0.1
	Th	22	4:18	10:18	16:48	22:41
			2.0	−0.2	2.0	0.1
	F	23	4:31	10:42	17:11	23:12
			1.9	−0.2	2.0	0.3
	S	24	4:45	11:07	17:38	23:46
			1.7	−0.2	1.9	0.5
	S	25	4:56	11:32	18:07	. . .
			1.6	−0.1	1.7	. . .
☽	M	26	0:23	5:07	11:54	18:54
			0.7	1.4	0.1	1.4
	Tu	27	1:21	5:05	12:02	23:17
			1.0	1.2	0.4	1.3
N	W	28	13:08	. . .	. . .	. . .
			0.7	. . .	. . .	. . .
	Th	29	0:58	8:05	14:00	19:00
			1.6	0.6	1.1	0.6

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	1:38	7:58	14:17	19:45
			1.8	0.3	1.5	0.4
	S	2	2:06	8:17	14:38	20:19
			2.0	0.1	1.8	0.2
○	S	3	2:34	8:38	15:00	20:52
			2.2	−0.1	2.0	0.1
	M	4	3:00	9:04	15:26	21:24
			2.2	−0.2	2.2	0.1
E	Tu	5	3:22	9:28	15:50	21:55
			2.2	−0.3	2.3	0.1
	W	6	3:43	9:55	16:12	22:18
			2.1	−0.3	2.3	0.2
	Th	7	4:06	10:16	16:36	22:41
			2.0	−0.3	2.2	0.2
	F	8	4:27	10:37	17:02	23:02
			1.9	−0.2	2.0	0.3
	S	9	4:47	10:54	17:30	23:18
			1.7	−0.1	1.8	0.5
	S	10	5:08	11:11	18:00	23:37
			1.4	0.0	1.6	0.6
☾	M	11	4:56	11:21	18:35	. . .
			1.2	0.2	1.4	. . .
S	Tu	12	0.40	4:55	11:18	20:05
			0.8	1.1	0.4	1.1
A	W	13	6:45	18:50	18:47	. . .
			0.6	1.0	0.9	. . .
	Th	14	0:49	8:07	14:15	19:20
			1.3	0.4	1.1	0.6
	F	15	1:13	8:13	14:06	19:46
			1.6	0.3	1.3	0.5
	S	16	1:38	8:22	14:18	20:04
			1.8	0.2	1.6	0.3
	S	17	2:04	8:30	14:38	20:22
			2.0	0.1	1.9	0.2
	M	18	2:29	8:38	14:53	20:42
			2.1	0.0	2.0	0.1
●	Tu	19	2:52	8:50	15:16	21:04
E			2.1	−0.1	2.2	0.0
	W	20	3:14	9:04	15:37	21:29
			2.1	−0.2	2.3	0.0
	Th	21	3:34	9:24	16:00	21:55
			2.0	−0.3	2.3	0.0
	F	22	3:48	9:47	16:24	22:25
			1.9	−0.3	2.2	0.1
	S	23	4:08	10:11	16:45	22:54
			1.8	−0.3	2.1	0.2
	S	24	4:19	10:38	17:12	23:28
			1.6	−0.2	1.9	0.4
	M	25	4:34	11:02	17:38	. . .
			1.5	0.0	1.7	. . .
N	Tu	26	0:05	4:48	11:15	18:16
☽			0.6	1.3	0.3	1.4
	W	27	1:03	4:50	11:48	22:51
			0.9	1.1	0.6	1.2
	Th	28	6:24	12:58	18:24	. . .
			0.7	1.0	0.9	. . .
P	F	29	0:35	7:10	13:40	19:10
			1.5	0.5	1.4	0.6
	S	30	1:13	7:23	13:55	19:38
			1.7	0.3	1.8	0.4
	S	31	1:40	7:41	14:13	20:09
			1.9	0.1	2.0	0.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:7 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator: N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E	M	1	2:05 2.0	8:05 −0.1	14:33 2.3	20:38 0.1
○	Tu	2	2:30 2.0	8:30 −0.2	14:55 2.4	21:05 0.1
	W	3	2:53 2.0	8:53 −0.3	15:16 2.4	21:30 0.1
	Th	4	3:15 2.0	9:17 −0.3	15:42 2.4	21:53 0.1
	F	5	3:39 1.8	9:38 −0.3	16:05 2.2	22:18 0.1
	S	6	4:02 1.7	9:58 −0.2	16:30 2.1	22:32 0.2
	S	7	4:23 1.5	10:17 −0.1	16:57 1.9	22:53 0.3
S	M	8	4:40 1.3	11:34 0.1	17:24 1.7	23:15 0.5
☾	Tu	9	4:40 1.1	10:47 0.3	17:54 1.4	23:45 0.7
A	W	10	4:55 1.0	10:44 0.5	18:13 1.2	. . . . .
	Th	11	6:48 0.7	18:40 1.1	18:45 1.0	23:10 1.2
	F	12	7:25 0.5	13:40 1.2	19:04 0.8	. . . . .
	S	13	0:30 1.4	7:35 0.4	13:25 1.4	19:24 0.6
	S	14	1:00 1.5	7:40 0.3	13:40 1.8	19:44 0.4
E	M	15	1:29 1.8	7:44 0.2	14:00 2.0	20:02 0.2
	Tu	16	1:58 1.9	7:54 0.1	14:24 2.2	20:20 0.1
●	W	17	2:24 1.9	8:08 −0.1	14:43 2.3	20:45 0.0
	Th	18	2:44 1.8	8:28 −0.2	15:12 2.3	21:12 0.0
	F	19	3:05 1.7	8:53 −0.3	15:37 2.3	21:42 0.0
	S	20	3:25 1.6	9:21 −0.3	16:02 2.2	22:14 0.1
	S	21	3:46 1.5	9:48 −0.2	16:29 2.1	22:49 0.2
N	M	22	4:05 1.4	10:12 −0.1	17:57 1.9	23:25 0.4
P	Tu	23	4:32 1.3	10:44 0.2	17:30 1.7	. . . . .
☽	W	24	0:13 0.6	5:00 1.1	11:06 0.5	18:06 1.4
	Th	25	1:35 0.8	6:07 1.0	11:45 0.9	21:09 1.2
	F	26	4:50 0.7	12:50 1.2	18:12 0.9	23:30 1.3
	S	27	5:56 0.5	12:55 1.6	18:53 0.7	. . . . .
E	S	28	0:25 1.5	6:30 0.3	13:16 1.9	19:24 0.5
	M	29	1:00 1.6	7:00 0.1	13:38 2.1	19:54 0.3
	Tu	30	1:30 1.7	7:28 −0.1	14:00 2.3	20:20 0.2
MAY.						
○	W	1	1:56 1.8	7:53 −0.2	14:25 2.4	20:45 0.1
	Th	2	2:23 1.7	8:20 −0.2	14:48 2.4	21:10 0.1
	F	3	2:48 1.7	8:43 −0.2	15:12 2.3	21:34 0.1
	S	4	3:14 1.6	9:06 −0.2	15:40 2.2	21:54 0.1
S	S	5	3:45 1.4	9:28 −0.1	16:08 2.0	22:19 0.2
	M	6	4:10 1.3	9:50 0.0	16:36 1.9	22:45 0.3
	Tu	7	4:36 1.2	10:13 0.2	17:04 1.7	23:18 0.4
A	W	8	5:00 1.0	10:40 0.4	17:35 1.5	. . . . .
☾	Th	9	0:02 0.6	5:12 0.9	11:05 0.7	18:30 1.3
	F	10	1:00 0.7	21:00 1.3	. . . . .	
	S	11	6:12 0.7	11:53 1.2	18:25 0.9	22:53 1.3
	S	12	6:15 0.6	12:23 1.5	18:43 0.7	23:55 1.4
E	M	13	6:25 0.4	12:51 1.8	19:11 0.5	. . . . .
	Tu	14	0:41 1.5	6:38 0.3	13:22 2.0	19:32 0.4
	W	15	1:16 1.5	7:00 0.1	13:54 2.2	20:00 0.2
	Th	16	1:49 1.5	7:25 −0.1	14:24 2.3	20:28 0.1
●	F	17	2:17 1.5	7:55 −0.2	14:50 2.3	21:00 0.1
	S	18	2:41 1.5	8:28 −0.2	15:21 2.3	21:34 0.1
N P	S	19	3:13 1.4	9:00 −0.2	15:50 2.2	22:11 0.1
	M	20	3:42 1.3	9:35 0.0	16:24 2.0	22:50 0.2
	Tu	21	4:19 1.3	10:14 0.2	16:58 1.9	23:40 0.3
	W	22	5:05 1.2	11:00 0.5	17:35 1.7	. . . . .
☽	Th	23	0:32 0.5	6:15 1.2	12:08 0.7	18:26 1.5
	F	24	1:39 0.5	9:09 1.2	14:20 1.0	19:56 1.3
	S	25	3:25 0.6	11:06 1.4	17:20 1.0	22:00 1.3
E	S	26	4:35 0.4	11:54 1.7	18:23 0.8	23:14 1.3
	M	27	5:30 0.3	12:30 1.9	19:00 0.6	. . . . .
	Tu	28	0:04 1.4	6:13 0.1	13:00 2.1	19:34 0.4
	W	29	0:45 1.4	6:47 0.0	13:29 2.2	20:02 0.3
	Th	30	1:23 1.4	7:19 0.0	13:54 2.2	20:30 0.2
○	F	31	1:58 1.4	7:49 −0.1	14:25 2.2	20:55 0.2
JUNE.						
	S	1	2:31 1.4	8:19 −0.1	14:54 2.2	21:22 0.1
S	S	2	3:05 1.3	8:42 0.0	15:25 2.1	21:48 0.2
	M	3	3:38 1.3	9:09 0.1	15:55 2.0	22:15 0.2
A	Tu	4	4:17 1.2	9:38 0.2	16:29 1.9	22:46 0.3
	W	5	4:56 1.2	10:12 0.3	17:01 1.8	23:22 0.3
	Th	6	5:43 1.1	10:50 0.5	17:39 1.6	. . . . .
	F	7	0:00 0.4	6:42 1.1	11:45 0.7	18:20 1.5
☾	S	8	0:48 0.5	8:38 1.2	12:54 0.9	19:14 1.3
E	S	9	1:55 0.5	10:00 1.3	15:11 1.0	21:02 1.2
	M	10	3:14 0.5	11:02 1.5	17:34 0.9	22:25 1.2
	Tu	11	4:25 0.4	11:55 1.8	18:25 0.7	23:34 1.2
	W	12	5:21 0.3	12:41 1.9	19:05 0.5	. . . . .
	Th	13	0:24 1.2	6:09 0.1	13:20 2.1	19:34 0.4
	F	14	1:10 1.2	6:51 0.0	14:00 2.2	20:15 0.3
●	S	15	1:55 1.2	7:34 0.0	14:35 2.2	20:54 0.2
N P	S	16	2:36 1.3	8:13 0.0	15:12 2.2	21:31 0.2
	M	17	3:18 1.3	8:55 0.0	15:46 2.1	22:14 0.1
	Tu	18	4:04 1.3	9:43 0.2	16:24 2.0	23:00 0.2
	W	19	4:52 1.4	10:36 0.4	17:00 1.9	23:42 0.2
	Th	20	5:45 1.4	11:32 0.6	17:35 1.7	. . . . .
	F	21	0:25 0.3	6:44 1.4	12:34 0.8	18:22 1.6
☽ E	S	22	1:15 0.3	8:07 1.5	14:04 0.9	19:06 1.4
	S	23	2:14 0.4	9:30 1.6	16:08 1.0	20:22 1.2
	M	24	3:24 0.4	10:39 1.7	17:39 0.9	21:46 1.2
	Tu	25	4:26 0.3	11:33 1.7	18:36 0.7	22:58 1.1
	W	26	5:22 0.2	12:19 1.9	19:18 0.5	. . . . .
	Th	27	0:04 1.1	6:14 0.2	13:00 2.0	19:54 0.4
	F	28	1:00 1.2	6:54 0.1	13:34 2.0	20:24 0.3
S ○	S	29	1:46 1.2	7:34 0.1	14:15 2.0	20:54 0.2
	S	30	2:30 1.3	8:08 0.1	14:43 2.1	21:22 0.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard for the meridian 82° 30′ E.; 0h is midnight, 12h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:10	8:35	15:15	21:53
			1.3	0.2	2.1	0.2
A	Tu	2	3:46	9:08	15:51	22:18
			1.3	0.2	2.0	0.2
	W	3	4:25	9:40	16:28	22:44
			1.3	0.3	1.9	0.2
	Th	4	5:04	10:19	16:55	23:14
			1.4	0.4	1.9	0.2
	F	5	5:45	11:00	17:24	23:44
			1.4	0.5	1.7	0.2
E	S	6	6:24	11:48	17:55	. . .
			1.4	0.6	1.6	. . .
☾	S	7	0:13	7:14	12:35	18:25
			0.3	1.4	0.7	1.4
	M	8	0:55	8:25	13:43	18:54
			0.3	1.5	0.9	1.3
	Tu	9	1:45	9:46	15:25	20:05
			0.3	1.5	0.9	1.1
	W	10	2:52	11:00	17:24	21:52
			0.3	1.6	0.8	1.0
	Th	11	4:09	12:04	18:44	23:25
			0.3	1.8	0.6	1.0
	F	12	5:25	13:00	19:29	. . .
			0.2	1.9	0.5	. . .
N	S	13	0:54	6:30	14:48	20:08
			1.1	0.2	2.1	0.3
●	S	14	1:58	7:24	14:28	20:47
			1.2	0.1	2.1	0.2
P	M	15	2:48	8:14	15:06	21:25
			1.3	0.1	2.1	0.2
	Tu	16	3:31	9:04	15:44	22:04
			1.5	0.2	2.1	0.1
	W	17	4:15	9:54	16:18	22:43
			1.6	0.3	2.0	0.1
	Th	18	4:56	10:44	16:50	23:20
			1.7	0.4	1.9	0.1
E	F	19	5:38	11:31	17:21	23:58
			1.7	0.6	1.8	0.1
	S	20	6:21	12:19	17:58	. . .
			1.7	0.7	1.6	. . .
☽	S	21	0:32	7:09	13:11	18:27
			0.1	1.7	0.8	1.5
	M	22	1:12	8:10	14:29	19:09
			0.2	1.6	1.0	1.3
	Tu	23	2:00	9:20	16:41	20:20
			0.3	1.6	0.9	1.1
	W	24	3:12	10:32	18:27	21:58
			0.4	1.6	0.8	0.9
	Th	25	4:35	11:40	19:15	23:43
			0.4	1.6	0.6	1.0
S	F	26	5:53	12:39	19:53	. . .
			0.4	1.7	0.4	. . .
	S	27	1:00	6:47	13:28	20:25
			1.1	0.3	1.9	0.3
	S	28	1:58	7:31	14:01	20:53
			1.2	0.3	2.0	0.2
○ A	M	29	2:34	8:06	14:35	21:18
			1.3	0.2	2.0	0.2
	Tu	30	3:10	8:37	15:08	21:39
			1.4	0.2	2.0	0.2
	W	31	3:44	9:08	15:39	21:58
			1.5	0.2	2.0	0.1

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:16	9:40	16:09	22:18
			1.6	0.3	2.0	0.1
	F	2	4:46	10:14	16:35	22:43
			1.6	0.3	1.9	0.1
E	S	3	5:15	10:51	16:58	23:09
			1.7	0.4	1.8	0.1
	S	4	5:47	11:28	17:19	23:39
			1.7	0.5	1.6	0.1
	M	5	6:23	12:09	17:36	. . .
			1.6	0.6	1.5	. . .
☾	Tu	6	0:11	7:09	12:59	17:57
			0.1	1.6	0.7	1.3
	W	7	0:50	8:23	14:14	18:23
			0.1	1.5	0.9	1.1
	Th	8	1:42	10:05	16:24	19:02
			0.3	1.5	0.9	1.0
N	F	9	3:14	11:40	18:48	23:15
			0.4	1.6	0.7	0.9
	S	10	5:10	12:48	19:24	. . .
			0.4	1.8	0.5	. . .
	S	11	1:14	6:35	13:40	19:59
			1.1	0.3	2.0	0.3
P	M	12	2:06	7:33	14:18	20:32
			1.3	0.3	2.1	0.2
●	Tu	13	2:47	8:22	14:58	21:05
			1.6	0.2	2.1	0.1
	W	14	3:28	9:08	15:26	21:40
			1.8	0.2	2.1	0.0
E	Th	15	3:58	9:52	15:56	22:14
			1.9	0.3	2.0	0.0
	F	16	4:32	10:33	16:24	22:46
			1.9	0.4	1.9	—0.1
	S	17	5:06	11:13	16:53	23:17
			1.9	0.5	1.8	0.0
	S	18	5:41	11:48	17:20	23:48
			1.9	0.6	1.6	0.0
☽	M	19	6:19	12:20	17:48	. . .
			1.7	0.7	1.4	. . .
	Tu	20	0:17	7:02	13:58	18:18
			0.1	1.6	0.8	1.2
	W	21	0:48	8:05	15:30	18:54
			0.3	1.5	0.9	1.0
S	Th	22	1:34	9:34	18:45	21:28
			0.4	1.4	0.8	0.9
	F	23	3:58	11:13	19:22	. . .
			0.6	1.4	0.6	. . .
	S	24	0:10	5:59	12:25	19:49
			0.9	0.5	1.6	0.4
A	S	25	1:16	6:58	13:13	20:13
			1.1	0.4	1.8	0.3
	M	26	1:54	7:36	13:51	20:34
			1.3	0.4	1.9	0.2
	Tu	27	2:25	8:07	14:22	20:52
			1.5	0 3	2.0	0.2
○	W	28	2:55	8:35	14:52	21:06
			1.7	0.2	2.0	0.1
	Th	29	3:23	9:01	15:20	21:22
			1.8	0.2	2.0	0.1
E	F	30	3:51	9:29	15:45	21:42
			1.9	0.2	1.9	0.0
	S	31	4:17	9:59	16:08	22:05
			1.9	0.2	1.8	—0.1

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:42	10:30	16:26	22:31
			1.9	0.2	1.7	—0.1
	M	2	5:09	11:05	16:42	23:01
			1.8	0.3	1.6	—0.1
	Tu	3	5:40	11:43	16:59	23:32
			1.8	0.5	1.4	0.0
☾	W	4	6:18	12:28	17:18	. . .
			1.6	0.6	1.3	. . .
	Th	5	0:09	7:15	13:32	17:46
			0.1	1.5	0.8	1.1
N	F	6	0:53	9:19	15:54	18:12
			0.4	1.4	0.8	0.9
	S	7	2:45	11:26	18:34	. . .
			0.6	1.5	0.7	. . .
	S	8	0:24	5:33	12:37	19:02
			1.0	0.6	1.7	0.5
P	M	9	1:21	6:51	13:23	19:33
			1.3	0.5	1.9	0.3
	Tu	10	1:58	7:40	13:59	20:04
			1.6	0.3	2.0	0.1
●	W	11	2:30	8:22	14:30	20:35
			1.9	0.3	2.0	0.0
E	Th	12	2:59	8:59	14:59	21:05
			2.1	0.2	2.0	—0.1
	F	13	3:29	9:35	15:26	21:36
			2.2	0.2	2.0	—0.1
	S	14	3:59	10:08	15:53	22:04
			2.2	0.3	1.8	—0.1
	S	15	4:29	10:40	16:20	22:33
			2.1	0.3	1.7	—0.1
	M	16	4:59	11:09	16:48	22:59
			2.0	0.4	1.5	0.0
	Tu	17	5:34	11:36	17:14	23:28
			1.8	0.5	1.3	0.1
☽	W	18	6:12	12:06	17:43	23:47
			1.6	0.7	1.1	0.3
S	Th	19	7:04	12:49	18:00	. . .
			1.4	0.8	0.9	. . .
	F	20	0:16	8:37	18:45	22:08
			0.5	1.3	0.7	0.8
	S	21	1:24	10:39	19:02	. . .
			0.8	1.3	0.6	. . .
A	S	22	0:35	6:13	12:08	19:24
			1.0	0.7	1.5	0.4
	M	23	1:09	6:58	12:52	19:43
			1.3	0.5	1.7	0.3
	Tu	24	1:36	7:30	13:28	19:59
			1.5	0.4	1.8	0.3
	W	25	2:02	7:57	13:59	20:11
			1.7	0.3	1.9	0.2
E ○	Th	26	2:29	8:21	14:28	20:25
			1.9	0.2	1.9	0.1
	F	27	2:54	8:44	14:53	20:43
			2.0	0.1	1.9	0.0
	S	28	3:21	9:11	15:17	21:04
			2.1	0.1	1.8	—0.1
	S	29	3:45	9:40	15:37	21:30
			2.1	0.1	1.7	—0.2
	M	30	4:11	10:12	15:55	21:58
			2.0	0.2	1.6	—0.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	4:38	10:47	16:12	22:29
			2.0	0.3	1.5	−0.1
	W	2	5:09	11:25	16:34	23:00
			1.8	0.4	1.3	0.0
N	Th	3	5:44	12:12	17:01	23:36
			1.7	0.6	1.2	0.3
☾	F	4	6:35	13:16	17:39	. . .
			1.6	0.7	1.0	. . .
	S	5	0:25	8:35	15:33	22:30
			0.6	1.5	0.8	0.9
	S	6	3:25	11:01	17:40	. . .
			0.8	1.4	0.6	. . .
	M	7	0:23	6:01	12:11	18:24
			1.3	0.7	1.6	0.4
P	Tu	8	1:08	6:55	12:55	18:58
			1.6	0.5	1.7	0.2
E	W	9	1:35	7:35	13:31	19:31
			1.9	0.4	1.8	0.1
●	Th	10	2:04	8:11	14:02	20:00
			2.1	0.3	1.9	−0.1
	F	11	2:31	8:43	14:29	20:30
			2.2	0.2	1.8	−0.1
	S	12	2:58	9:15	14:57	20:59
			2.3	0.2	1.8	−0.2
	S	13	3:25	9:44	15:23	21:27
			2.2	0.2	1.7	−0.1
	M	14	3:54	10:12	15:52	21:52
			2.1	0.2	1.5	−0.1
	Tu	15	4:25	10:38	16:22	22:17
			2.0	0.3	1.4	0.1
S	W	16	4:57	11:05	16:52	22:41
			1.8	0.4	1.2	0.2
	Th	17	5:33	11:35	17:25	23:05
			1.6	0.5	1.1	0.4
☽	F	18	6:16	12:21	18:22	23:35
			1.4	0.7	0.9	0.6
A	S	19	7:28	17:44	22:17	. . .
			1.3	0.7	0.9	. . .
	S	20	0:25	9:42	18:18	23:58
			0.9	1.2	0.6	1.1
	M	21	6:04	11:11	18:40	. . .
			0.8	1.4	0.5	. . .
	Tu	22	0:32	6:43	12:11	18:57
			1.4	0.6	1.5	0.4
E	W	23	1:01	7:12	12:58	19:11
			1.7	0.5	1.6	0.3
	Th	24	1:31	7:38	13:27	19:27
			1.9	0.4	1.7	0.2
	F	25	1:58	8:01	13:59	19:44
			2.0	0.2	1.7	0.1
○	S	26	2:26	8:28	14:28	20:06
			2.2	0.2	1.6	0.0
	S	27	2:54	8:54	14:49	20:32
			2.2	0.1	1.6	−0.1
	M	28	3:22	9:26	15:13	21:02
			2.2	0.1	1.5	−0.2
	Tu	29	3:51	10:00	15:35	21:32
			2.1	0.1	1.4	−0.1
N	W	30	4:21	10:38	16:00	22:07
			2.0	0.2	1.3	0.0
	Th	31	4:52	11:19	16:33	22:44
			1.9	0.4	1.2	0.2
NOVEMBER.						
	F	1	5:29	12:09	17:17	23:30
			1.7	0.5	1.1	0.5
☾	S	2	6:15	13:13	18:39	. . .
			1.5	0.6	1.1	. . .
P	S	3	0:43	7:41	14:56	22:37
			0.8	1.4	0.7	1.2
	M	4	4:10	10:01	16:37	23:53
			0.9	1.3	0.6	1.5
	Tu	5	5:58	11:24	17:35	. . .
			0.8	1.4	0.4	. . .
E	W	6	0:33	6:47	12:17	18:19
			1.8	0.6	1.5	0.2
	Th	7	1:07	7:24	12:58	18:55
			2.0	0.5	1.6	0.1
	F	8	1:37	7:59	13:32	19:28
			2.2	0.3	1.6	−0.1
●	S	9	2:08	8:29	14:04	20:00
			2.3	0.2	1.6	−0.1
	S	10	2:31	8:59	14:34	20:29
			2.3	0.2	1.6	−0.1
	M	11	3:01	9:27	15:05	20:57
			2.2	0.2	1.5	−0.1
S	Tu	12	3:30	9:54	15:38	21:24
			2.1	0.2	1.3	0.0
	W	13	4:02	10:22	16:13	21:51
			2.0	0.2	1.3	0.1
	Th	14	4:35	10:51	16:52	22:21
			1.9	0.3	1.2	0.3
	F	15	5:10	11:25	17:35	22:51
			1.7	0.4	1.1	0.5
A	S	16	5:49	12:05	18:44	23:34
			1.6	0.5	1.0	0.7
☽	S	17	6:37	12:59	20:54	. . .
			1.4	0.6	1.0	. . .
	M	18	0:41	8:07	14:58	22:38
			0.9	1.3	0.7	1.2
	Tu	19	5:08	9:52	17:00	23:35
			1.0	1.2	0.6	1.5
E	W	20	6:13	11:09	17:44	. . .
			0.8	1.3	0.5	. . .
	Th	21	0:20	6:50	12:07	18:10
			1.7	0.6	1.3	0.4
	F	22	0:58	7:19	12:54	18:38
			1.9	0.5	1.4	0.2
	S	23	1:31	7:47	13:35	19:07
			2.0	0.3	1.4	0.1
○	S	24	2:05	8:15	14:06	19:39
			2.1	0.2	1.4	0.0
	M	25	2:37	8:47	14:37	20:12
			2.2	0.2	1.4	−0.1
	Tu	26	3:10	9:20	15:07	20:47
			2.2	0.1	1.3	−0.1
N	W	27	3:42	9:58	15:40	21:25
			2.1	0.1	1.3	0.0
P	Th	28	4:16	10:37	16:19	22:08
			2.1	0.2	1.3	0.1
	F	29	4:49	11:19	17:02	22:54
			1.9	0.3	1.3	0.4
	S	30	5:25	12:06	17:58	23:58
			1.8	0.3	1.3	0.6
DECEMBER.						
☾	S	1	6:04	12:56	19:14	. . .
			1.6	0.4	1.3	. . .
	M	2	0:58	6:50	14:00	21:23
			0.8	1.5	0.5	1.4
E	Tu	3	3:28	8:23	15:25	22:57
			1.0	1.3	0.5	1.6
	W	4	5:35	10:05	16:37	23:55
			0.9	1.2	0.4	1.8
	Th	5	6:38	11:26	17:38	. . .
			0.7	1.2	0.3	. . .
	F	6	0:40	7:20	12:22	18:24
			2.0	0.6	1.3	0.2
	S	7	1:14	7:54	13:10	19:05
			2.1	0.4	1.3	0.1
●	S	8	1:48	8:25	13:58	19:45
			2.1	0.3	1.4	0.0
	M	9	2:18	8:55	14:30	20:15
			2.1	0.2	1.4	0.0
S	Tu	10	2:48	9:24	15:07	20:47
			2.1	0.1	1.4	0.0
	W	11	3:18	9:53	15:41	21:17
			2.1	0.1	1.4	0.1
	Th	12	3:54	10:18	16:18	21:46
			2.0	0.2	1.3	0.2
	F	13	4:24	10:45	16:57	22:18
			2.0	0.2	1.3	0.3
A	S	14	4:55	11:15	17:36	22:54
			1.9	0.3	1.3	0.5
	S	15	5:30	11:45	18:23	23:35
			1.7	0.3	1.3	0.6
	M	16	6:00	12:18	19:15	. . .
			1.7	0.4	1.3	. . .
☽ E	Tu	17	0:23	6:35	13:00	20:43
			0.8	1.4	0.5	1.3
	W	18	1:34	7:25	13:54	22:15
			0.9	1.2	0.5	1.4
	Th	19	4:05	9:08	15:14	23:28
			1.0	1.1	0.5	1.6
	F	20	6:42	10:56	16:42	. . .
			0.8	1.0	0.5	. . .
	S	21	0:28	7:16	12:20	17:52
			1.8	0.6	1.0	0.3
	S	22	1:16	7:48	13:18	18:40
			1.9	0.5	1.1	0.2
	M	23	1:55	8:18	14:04	19:25
			2.1	0.3	1.2	0.1
N ○	Tu	24	2:35	8:48	14:43	20:07
			2.2	0.2	1.3	0.0
	W	25	3:07	9:24	15:25	20:52
			2.2	0.1	1.4	0.0
P	Th	26	3:44	9:58	15:58	21:35
			2.2	0.1	1.5	0.1
	F	27	4:14	10:34	16:38	22:21
			2.2	0.0	1.5	0.2
	S	28	4:45	11:11	17:17	23:05
			2.0	0.1	1.6	0.4
	S	29	5:15	11:48	18:00	23:52
			1.9	0.1	1.6	0.6
E	M	30	5:45	12:24	18:50	. . .
			1.7	0.2	1.6	. . .
☾	Tu	31	0:43	6:15	13:05	19:57
			0.8	1.5	0.3	1.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 1.0 foot below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:40	8:18	14:42	21:54
			4.7	9.0	0.0	10:9
	Tu	2	3:46	9:26	15:40	22:50
			4.1	9.3	—1.0	12.2
	W	3	4:43	10:28	16:30	23:37
			3.4	9.8	—1.8	12.3
N	Th	4	5:35	11:22	17:21	. . .
○			2.8	10.3	—2.3	. . .
P	F	5	0:21	6:24	12:18	18:10
			14.0	2.2	10.8	—2.4
	S	6	1:05	7:10	13:02	19:00
			14.3	1.5	11.0	—2.1
	S	7	1:47	7:57	13:50	19:46
			14.2	1.2	11.0	—1.3
	M	8	2:30	8:40	14:40	20:34
			13.8	1.0	10.6	—0.1
	Tu	9	3:10	9:26	15:31	21:22
			12.9	1.1	10.2	1.3
E	W	10	3:52	10:16	16:28	22:20
			11.9	1.3	9.5	2.7
☾	Th	11	4:38	11:12	17:33	23:30
			10.8	1.5	8.8	4.0
	F	12	5:27	12:12	18:54	. . .
			9.7	1.7	8.5	. . .
	S	13	0:52	6:20	13:14	20:30
			5.0	8.7	1.9	8.7
	S	14	2:22	7:30	14:20	21:50
			5.5	8.0	1.7	9.4
	M	15	3:44	8:50	15:14	22:40
			5.5	7.5	1.5	10.0
	Tu	16	4:46	9:54	15:58	23:17
			5.3	7.7	1.2	10.6
S	W	17	5:30	10:44	16:36	23:48
			4.6	7.9	0.8	11.3
A	Th	18	6:02	11:24	17:10	. . .
			4.2	8.3	0.5	. . .
●	F	19	0:15	6:28	11:59	17:42
			11.8	8.7	8.5	0.3
	S	20	0:44	6:58	12:34	18:14
			12.2	8.2	8.9	0.1
	S	21	1:10	7:18	13:05	18:48
			12.4	2.8	9.2	0.2
	M	22	1:38	7:40	13:38	19:20
			12.4	2.4	9.5	0.5
	Tu	23	2:06	8:06	14:12	19:52
			12.2	1.9	9.5	1.0
	W	24	2:34	8:34	14:48	20:18
			11.8	1.6	9.5	1.6
E	Th	25	3:04	9:10	15:31	21:06
			11.4	1.3	9.4	2.4
	F	26	3:37	9:48	16:17	21:50
			10.6	1.2	9.2	3.5
☽	S	27	4:12	10:35	17:15	22:47
			10.0	1.2	8.9	4.6
	S	28	4:53	11:40	18:35	. . .
			9.3	1.2	8.8	. . .
	M	29	0:28	5:55	12:57	20:18
			5.4	8.7	1.0	9.3
	Tu	30	2:15	7:27	14:14	21:42
			5.4	8.2	0.5	10.4
N	W	31	3:40	9:07	15:24	22:39
			4.8	8.5	—0.2	11.7

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:41	10:20	16:24	23:25
			3.8	9.3	—1.0	12.8
P	F	2	5:30	11:18	17:17	. . .
			2.6	10.3	—1.6	. . .
○	S	3	0:06	6:14	12:08	18:05
			13.7	1.4	11.2	—1.8
	S	4	0:49	6:56	12:56	18:50
			14.2	0.5	11.7	—1.7
	M	5	1:27	7:35	13:41	19:35
			14.2	—0.1	11.9	—1.0
E	Tu	6	2:06	8:12	14:26	20:18
			13.7	—0.2	11.7	0.0
	W	7	2:48	8:51	15:11	21:01
			13.0	—0.1	11.2	1.2
	Th	8	3:19	9:32	15:58	21:45
			12.0	0.2	10.2	2.8
	F	9	3:55	10:16	16:50	22:35
			10.7	0.9	9.3	4.3
☾	S	10	4:31	11:05	17:50	23:45
			9.5	1.7	8.5	5.5
	S	11	5:08	12:08	19:25	. . .
			8.3	2.3	8.1	. . .
	M	12	1:44	6:08	13:20	21:30
			5.5	7.7	2.7	8.6
S	Tu	13	3:59	8:03	14:36	22:26
			6.0	6.5	2.6	9.3
A	W	14	4:58	9:42	15:33	22:58
			5.5	6.8	2.3	10.1
	Th	15	5:25	10:35	16:18	23:25
			4.5	7.3	1.8	10.7
	F	16	5:47	11:15	16:56	23:52
			3.8	8.1	1.3	11.4
	S	17	6:05	11:51	17:30	. . .
			3.2	8.9	0.7	. . .
●	S	18	0:18	6:25	12:20	18:02
			12.0	2.3	9.5	0.3
	M	19	0:45	6:47	12:52	18:35
			12.2	1.6	10.2	0.3
	Tu	20	1:11	7:10	13:23	19:07
			12.3	0.4	10.5	0.5
E	W	21	1:40	7:38	13:57	19:39
			12.2	0.4	10.9	0.8
	Th	22	2:08	8:05	14:32	20:12
			11.9	0.0	10.9	1.5
	F	23	2:28	8:37	15:10	20:48
			11.3	0.0	10.7	2.5
	S	24	3:08	9:15	15:58	21:27
			10.7	0.2	10.2	3.6
	S	25	3:40	9:57	16:50	22:38
			9.8	0.5	9.6	4.8
☽	M	26	4:20	10:59	18:06	. . .
			9.0	1.1	9.1	. . .
	Tu	27	0:01	5:20	12:22	19:54
			5.6	8.5	1.5	9.2
N	W	28	2:18	7:12	13:57	21:25
			5.6	7.6	1.3	10.1
	Th	29	3:38	9:07	15:17	22:22
			4.5	8.2	0.7	11.3

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:31	10:20	16:18	23:07
			3.1	9.4	—0.1	12.3
	S	2	5:15	11:13	17:10	23:48
			1.7	10.7	—0.7	13.1
○	S	3	5:54	12:00	17:57	. . .
			0.5	11.8	—1.0	. . .
	M	4	0:26	6:30	12:48	18:40
			13.4	—0.5	12.4	—0.9
E	Tu	5	1:02	7:05	13:25	19:20
			13.4	—1.0	12.7	—0.5
	W	6	1:39	7:40	14:07	19:58
			13.2	—1.1	12.5	0.5
	Th	7	2:12	8:14	14:47	20:35
			12.5	—0.9	11.8	1.8
	F	8	2:45	8:50	15:28	21:12
			11.4	—0.1	10.9	3.2
	S	9	3:15	9:24	16:12	21:50
			10.2	0.7	9.8	4.5
	S	10	3:45	9:59	16:59	22:38
			9.0	1.6	8.9	5.6
☾	M	11	4:18	10:42	18:07	. . .
			7.8	2.5	8.2	. . .
S	Tu	12	1:02	4:47	11:57	20:18
			6.4	6.6	3.4	8.1
A	W	13	3:55	7:05	13:42	21:42
			6.0	6.1	3.6	8.7
	Th	14	4:30	9:27	15:02	22:17
			5.2	6.3	3.2	9.4
	F	15	4:48	10:18	15:55	22:47
			4.2	7.4	2.7	10.2
	S	16	5:03	10:58	16:34	23:14
			3.3	8.3	2.0	10.7
	S	17	5:23	11:26	17:10	23:41
			2.3	9.4	1.3	11.3
	M	18	5:44	11:58	17:43	. . .
			1.3	10.3	0.9	. . .
●	Tu	19	0:09	6:09	12:30	18:17
E			11.7	0.5	11.2	0.6
	W	20	0:30	6:35	13:02	18:50
			12.0	—0.3	11.8	0.7
	Th	21	1:10	7:05	13:37	19:24
			11.9	—0.7	12.1	1.2
	F	22	1:41	7:37	14:17	20:00
			11.5	—0.9	12.0	2.0
	S	23	2:12	8:11	14:55	20:38
			10.9	—0.8	11.6	3.0
	S	24	2:44	8:47	15:42	21:18
			10.1	—0.3	10.9	4.0
	M	25	3:21	9:32	16:38	22:20
			9.3	0.5	10.1	5.0
N	Tu	26	4:08	10:34	17:53	. . .
☽			8.4	1.4	9.5	. . .
	W	27	0:12	5:28	12:07	19:32
			5.5	7.5	2.1	9.4
	Th	28	2:15	7:28	13:50	20:58
			4.7	7.5	2.1	10.0
P	F	29	3:22	9:11	15:12	21:55
			3.5	8.4	1.5	10.8
	S	30	4:09	10:14	16:12	22:40
			2.1	9.8	1.0	11.5
	S	31	4:48	11:00	17:00	23:18
			0.8	11.1	0.4	12.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case substract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E	M	1	5:24	11:45	17:43	23:57
			−0.2	12.0	0.1	12.5
○	Tu	2	5:58	12:27	18:23	. . .
			−1.0	12.8	0.3	. . .
	W	3	0:33	6:32	13:07	19:01
			12.5	−1.3	12.9	0.8
	Th	4	1:07	7:05	13:45	19:37
			12.0	−1.3	12.6	1.7
	F	5	1:40	7:37	14:22	20:12
			11.3	−0.9	12.0	2.7
	S	6	2:12	8:10	15:00	20:47
			10.4	−0.2	11.1	3.7
	S	7	2:42	8:40	15:38	21:22
			9.4	0.7	10.3	4.8
S	M	8	3:11	9:08	16:20	21:58
			8.3	1.7	9.4	5.7
☾	Tu	9	3:41	9:43	17:12	23:30
			6.2	2.7	8.6	6.0
A	W	10	4:25	10:37	18:27	. . .
			6.2	3.6	8.2	. . .
	Th	11	2:22	6:28	12:33	20:02
			5.5	6.0	4.1	8.4
	F	12	3:12	8:45	14:20	21:05
			4.5	6.4	3.9	8.9
	S	13	3:37	9:42	15:17	21:47
			3.7	7.5	3.3	9.4
	S	14	4:03	10:18	16:00	22:22
			2.8	8.7	2.7	10.1
E	M	15	4:30	10:52	16:38	22:56
			1.6	10.0	2.0	10.8
	Tu	16	4:48	11:27	17:17	23:30
			0.5	11.1	1.5	11.1
●	W	17	5:28	12:03	17:58	. . .
			−0.5	12.1	1.3	. . .
	Th	18	0:06	6:01	12:40	18:32
			11.3	−1.2	12.7	1.5
	F	19	0:40	6:35	13:20	19:12
			11.3	−1.7	12.9	2.0
	S	20	1:15	7:11	14:02	19:53
			11.0	−1.6	12.8	2.5
	S	21	1:52	8:48	14:48	20:37
			10.8	−1.2	12.3	3.4
N	M	22	2:32	8:32	15:37	21:27
			9.6	−0.5	11.5	4.1
P	Tu	23	3:18	9:22	16:32	22:42
			8.8	0.6	10.7	4.5
☽	W	24	4:20	10:30	17:40	. . .
			8.0	1.8	10.1	. . .
	Th	25	0:20	5:48	12:06	19:00
			4.3	7.5	2.6	9.8
	F	26	1:45	7:37	13:43	20:15
			3.5	7.9	2.7	9.9
	S	27	2:45	9:00	15:00	21:15
			2.5	9.0	2.4	10.2
E	S	28	3:31	9:57	15:55	22:03
			1.4	10.2	2.0	10.7
	M	29	4:13	10:46	16:42	22:47
			0.4	11.3	1.7	11.1
	Tu	30	4:50	11:30	17:24	23:25
			−0.4	12.1	1.7	11.2
MAY.						
○	W	1	5:25	12:08	18:03	. . .
			−1.0	12.5	1.9	. . .
	Th	2	0:02	6:02	12:47	18:41
			11.1	−1.2	12.6	2.3
	F	3	0:37	6:34	13:24	19:17
			10.7	−1.1	12.4	2.9
	S	4	1:10	7:05	14:00	19:55
			10.1	−0.7	12.0	3.6
S	S	5	1:43	7:35	14:37	20:32
			9.4	0.0	11.4	4.3
	M	6	2:17	8:04	15:14	21:02
			8.5	0.9	10.7	4.7
	Tu	7	2:50	8:33	15:52	21:50
			7.7	1.8	10.0	5.2
A	W	8	3:29	9:07	16:33	23:00
			7.0	2.7	9.4	5.4
☾	Th	9	4:24	9:57	17:23	. . .
			6.2	3.5	.0	. . .
	F	10	0:32	5:50	11:30	18:24
			4.7	6.4	4.2	8.8
	S	11	1:32	7:30	13:12	19:30
			4.0	6.8	4.2	8.8
	S	12	2:15	8:35	14:22	20:28
			3.1	7.8	4.0	9.2
E	M	13	2:58	9:28	15:15	21:20
			2.1	9.0	3.4	9.6
	Tu	14	3:35	10:15	16:03	22:08
			0.9	10.3	2.9	10.1
	W	15	4:15	10:58	16:48	22:50
			−0.3	11.5	2.5	10.5
	Th	16	4:51	11:42	17:33	23:32
			−1.2	12.5	2.3	10.6
●	F	17	5:30	12:24	18:17	. . .
			−1.9	13.1	2.4	. . .
	S	18	0:13	6:10	13:08	19:08
			10.6	−2.1	13.4	2.6
N	S	19	0:56	6:52	13:54	19:52
P			10.4	−1.9	13.3	3.0
	M	20	1:42	7:35	14:41	20:42
			10.4	−1.3	12.9	3.1
	Tu	21	2:30	8:25	15:30	21:39
			9.4	−0.3	12.2	3.3
	W	22	3:27	9:22	16:23	22:50
			8.8	0.8	11.4	3.3
☽	Th	23	4:33	10:32	17:20	. . .
			8.3	2.0	10.7	. . .
	F	24	0:05	5:53	11:57	18:50
			3.0	8.2	2.9	10.1
	S	25	1:10	7:23	13:30	19:33
			2.4	8.6	3.2	9.8
E	S	26	2:07	8:36	14:37	20:32
			1.6	9.4	3.3	9.8
	M	27	2:56	9:40	15:33	21:25
			0.9	10.2	3.3	9.8
	Tu	28	3:40	10:30	16:23	22:12
			0.2	11.0	3.2	9.9
	W	29	4:18	11:15	17:07	22:54
			−0.3	11.6	3.2	9.9
	Th	30	4:57	11:54	17:48	23:33
			−0.7	12.0	3.5	9.7
○	F	31	5:32	12:30	18:28	. . .
			−0.8	12.2	3.6	. . .
JUNE.						
	S	1	0:12	6:05	13:07	19:07
			9.5	−0.6	12.2	3.8
S	S	2	0:48	6:37	13:42	19:45
			9.1	−0.2	12.0	4.0
	M	3	1:24	7:08	14:16	20:22
			9.6	0.3	11.6	4.1
A	Tu	4	2:01	7:40	14:50	20:52
			8.2	1.0	11.1	4.2
	W	5	2:38	8:12	15:25	21:32
			7.6	1.8	10.6	4.2
	Th	6	3:19	8:50	16:00	22:22
			7.3	2.5	10.1	4.0
	F	7	4:10	9:40	16:37	23:18
			7.1	3.2	9.8	3.6
☾	S	8	5:12	10:40	17:29	. . .
			7.1	3.9	9.5	. . .
E	S	9	0:13	6:25	12:03	18:20
			3.1	7.4	4.3	9.2
	M	10	1:05	7:31	13:24	19:18
			2.3	8.1	4.4	9.2
	Tu	11	1:55	8:42	14:31	20:19
			1.5	9.1	4.2	9.2
	W	12	2:47	9:42	15:30	21:18
			0.4	10.3	3.8	9.5
	Th	13	3:35	10:35	16:24	22:14
			−0.6	11.5	3.5	9.8
	F	14	4:21	11:23	17:16	23:05
			−1.5	12.6	3.2	10.1
●	S	15	5:08	12:10	18:06	23:56
			−2.0	13.4	3.0	10.2
N	S	16	5:54	12:57	18:57	. . .
P			−2.2	13.7	2.7	. . .
	M	17	0:46	6:41	13:42	19:48
			10.3	−2.0	13.8	2.5
	Tu	18	1:37	7:30	14:29	20:40
			10.2	−1.3	13.4	2.2
	W	19	2:30	8:23	15:15	21:30
			9.8	−0.4	12.8	2.1
	Th	20	3:27	9:20	16:02	22:29
			9.5	0.8	12.0	2.0
	F	21	4:27	10:22	16:52	23:30
			9.2	2.1	11.1	1.8
☽	S	22	5:37	11:37	17:50	. . .
E			8.9	3.1	10.3	. . .
	S	23	0:30	6:55	12:59	18:46
			1.5	8.9	3.9	9.6
	M	24	1:27	8:10	14:09	19:45
			1.2	9.3	4.3	9.1
	Tu	25	2:21	9:22	15:12	20:45
			0.9	9.9	4.5	8.8
	W	26	3:10	10:19	16:10	21:40
			0.6	10.5	4.5	8.7
	Th	27	3:53	11:03	17:00	22:30
			0.2	11.0	4.4	8.7
	F	28	4:33	11:44	17:44	23:15
			0.0	11.2	4.2	8.7
S	S	29	5:10	12:17	18:23	23:57
○			0.0	11.8	4.1	8.7
	S	30	5:45	12:50	18:59	. . .
			0.0	12.0	4.0	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	0:35	6:18	13:22	19:32
			8.6	0.2	11.9	3.6
A	Tu	2	1:11	6:50	13:53	20:02
			8.4	0.5	11.8	3.6
	W	3	1:47	7:22	14:23	20:27
			8.3	1.0	11.5	3.3
	Th	4	2:23	7:57	14:54	20:58
			8.2	1.6	11.1	3.1
	F	5	3:01	8:32	15:25	21:35
			8.1	2.2	10.8	2.8
E	S	6	3:46	9:12	15:58	22:17
			8.0	2.8	10.4	2.5
☾	S	7	4:36	10:02	16:37	23:07
			8.0	3.5	9.8	2.2
	M	8	5:30	11:07	17:20	. . .
			8.2	4.3	9.4	. . .
	Tu	9	0:02	6:38	12:30	18:13
			1.7	8.5	4.8	9.1
	W	10	1:04	8:02	13:55	19:20
			1.1	9.2	5.0	8.9
	Th	11	2:06	9:16	15:06	20:38
			0.3	10.2	4.6	8.9
	F	12	3:05	10:18	16:11	21:50
			—0.5	11.4	4.2	9.3
N	S	13	4:02	11:10	17:07	22:52
			—1.3	12.5	3.5	9.8
●	S	14	4:54	11:58	17:58	23:47
			—1.8	13.3	2.7	10.4
P	M	15	5:45	12:42	18:47	. . .
			—2.1	13.9	1.8	. . .
	Tu	16	0:40	6:35	13:26	19:33
			10.7	—1.9	14.0	1.3
	W	17	1:30	7:23	14:08	20:18
			11.0	—1.3	13.7	0.9
	Th	18	2:20	8:13	14:52	21:02
			10.9	—0.4	13.1	0.7
E	F	19	3:12	9:04	15:34	21:52
			10.6	0.9	12.2	0.8
	S	20	4:07	10:00	16:19	22:45
			10.1	2.2	11.2	1.0
☽	S	21	5:07	11:05	17:04	23:43
			9.5	3.5	10.2	1.3
	M	22	6:18	12:20	17:53	. . .
			9.0	4.5	9.1	. . .
	Tu	23	0:44	7:45	13:46	18:56
			1.5	8.9	5.2	8.3
	W	24	1:47	9:07	15:05	20:10
			1.5	9.4	5.5	7.8
	Th	25	2:45	10:10	16:14	21:24
			1.4	10.0	5.2	7.8
S	F	26	3:36	10:55	17:04	22:21
			1.2	10.5	4.7	7.8
	S	27	4:18	11:29	17:43	23:07
			1.0	11.0	4.2	8.2
	S	28	4:57	12:00	18:13	23:47
			0.8	11.5	3.7	8.5
○	M	29	5:30	12:30	18:40	. . .
A			0.6	11.8	3.2	. . .
	Tu	30	0:22	6:03	12:57	19:05
			8.8	0.5	12.0	3.0
	W	31	0:57	6:35	13:25	19:28
			9.0	0.7	11.9	2.5

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	1:30	7:07	13:52	19:52
			9.2	0.9	11.7	2.0
	F	2	2:02	7:35	14:20	20:19
			9.3	1.4	11.5	1.7
E	S	3	2:37	8:10	14:50	20:50
			9.3	1.9	11.1	1.4
	S	4	3:16	8:47	15:20	21:27
			9.3	2.6	10.5	1.3
	M	5	4:00	9:30	15:52	22:10
			9.2	3.5	9.9	1.3
☾	Tu	6	4:51	10:20	16:31	23:08
			9.0	4.5	9.3	1.3
	W	7	6:00	11:43	17:24	. . .
			8.8	5.3	9.7	. . .
	Th	8	0:20	7:32	13:35	18:43
			1.2	9.1	5.5	8.1
N	F	9	1:38	9:00	15:02	20:22
			0.8	10.0	5.0	8.3
	S	10	2:50	10:05	16:05	21:43
			0.1	11.1	4.1	9.1
	S	11	3:52	10:55	16:57	22:47
			—0.6	12.3	3.0	9.9
P	M	12	4:47	11:40	17:43	23:42
			—1.3	13.2	1.6	11.0
○	Tu	13	5:38	12:22	18:26	. . .
			—1.7	13.8	0.6	. . .
	W	14	0:30	6:25	13:02	19:07
			11.7	—1.6	13.9	—0.1
E	Th	15	1:18	7:11	13:42	19:47
			12.0	—1.1	13.5	—0.4
	F	16	2:08	7:57	14:21	20:26
			12.0	—0.2	13.0	—0.4
	S	17	2:50	8:42	15:00	21:08
			11.6	1.0	12.0	—0.1
	S	18	3:40	9:28	15:38	21:55
			10.8	2.5	10.9	0.6
☽	M	19	4:32	10:24	16:18	22:47
			9.8	4.0	9.6	1.4
	Tu	20	5:33	11:40	17:02	23:50
			8.9	5.2	8.5	2.1
	W	21	6:57	13:28	18:05	. . .
			8.6	5.4	7.5	. . .
S	Th	22	1:05	8:48	15:17	19:50
			2.4	8.9	5.6	6.8
	F	23	2:23	9:57	16:22	21:22
			2.5	9.4	5.0	6.9
	S	24	3:20	10:36	17:00	22:20
			2.2	10.1	4.3	7.6
A	S	25	4:07	11:06	17:25	23:00
			1.8	10.6	3.6	8.3
	M	26	4:43	11:33	17:45	23:35
			1.4	11.2	2.9	8.9
	Tu	27	5:17	12:00	18:06	. . .
			1.1	11.6	2.3	. . .
○	W	28	0:05	5:48	12:28	18:28
			9.5	0.9	11.7	1.6
	Th	29	0:37	6:18	12:50	18:50
			10.0	0.8	11.8	1.1
E	F	30	1:07	6:45	13:18	19:15
			10.4	1.0	11.8	0.1
	S	31	1:40	7:18	13:46	19:42
			10.7	1.2	11.4	0.3

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	2:12	7:50	14:16	20:13
			10.7	1.9	11.0	0.2
	M	2	2:47	8:23	14:43	20:48
			10.5	2.7	10.3	0.3
	Tu	3	3:31	9:02	15:15	21:27
			10.1	3.7	9.7	0.7
☾	W	4	4:34	9:48	15:53	22:24
			9.6	4.7	8.9	1.2
	Th	5	5:33	11:14	16:57	23:40
			9.1	5.6	8.1	1.6
N	F	6	7:11	13:42	18:34	. . .
			9.1	5.5	7.5	. . .
	S	7	1:22	8:47	15:05	20:30
			1.5	9.8	4.5	8.0
	S	8	2:45	9:48	15:58	21:48
			1.0	10.9	3.1	9.1
P	M	9	3:49	10:36	16:42	22:45
			0.2	12.0	1.7	10.6
	Tu	10	4:42	11:18	17:22	23:32
			—0.5	12.8	0.4	11.8
●	W	11	5:29	11:57	17:59	. . .
			—0.9	13.2	—0.6	. . .
E	Th	12	0:17	6:18	12:35	18:36
			12.6	—1.0	13.3	—1.3
	F	13	1:00	6:56	13:13	19:12
			13.0	—0.5	13.1	—1.5
	S	14	1:42	7:35	13:49	19:48
			12.9	0.4	12.5	—1.2
	S	15	2:25	8:15	14:24	20:27
			12.3	1.6	11.5	—0.5
	M	16	3:08	8:55	15:00	21:05
			11.3	3.0	10.3	0.4
	Tu	17	3:55	9:43	15:35	21:48
			10.2	4.4	9.0	1.5
☽	W	18	4:48	10:52	16:15	22:40
			9.2	5.5	7.7	2.5
S	Th	19	6:01	13:24	17:20	. . .
			8.5	6.0	7.0	. . .
	F	20	0:10	8:00	15:20	19:48
			3.3	8.4	5.3	6.3
	S	21	1:54	9:22	16:05	21:28
			3.6	9.0	4.3	6.9
A	S	22	3:00	10:01	16:30	22:10
			3.2	9.6	3.6	7.7
	M	23	3:50	10:30	16:48	22:43
			2.7	10.2	2.8	8.6
	Tu	24	4:25	10:55	17:05	23:13
			2.1	10.6	2.1	9.6
	W	25	4:57	11:20	17:25	23:42
			1.6	11.0	1.3	10.4
E	Th	26	5:25	11:48	17:48	. . .
○			1.3	11.4	0.4	. . .
	F	27	0:11	5:57	12:16	18:13
			11.1	1.0	11.6	—0.3
	S	28	0:41	6:27	12:45	18:40
			11.7	1.1	11.5	—0.7
	S	29	1:14	6:59	13:15	19:10
			12.0	1.5	11.2	—0.9
	M	30	1:50	7:33	13:45	19:42
			11.9	2.2	10.7	—0.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Indian Standard for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.), and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	2:28	8:09	14:15	20:17
			11.6	3.0	10.0	−0.3
	W	2	3:15	8:46	14:50	21:00
			10.9	4.0	9.0	0.4
N	Th	3	4:08	9:42	15:17	21:55
			10.2	4.9	8.2	1.4
☾	F	4	5:17	11:25	16:50	22:23
			9.6	5.4	7.5	2.3
	S	5	6:51	13:42	18:51	. . .
			9.3	4.8	7.3	. . .
	S	6	1:15	8:20	14:53	20:40
			2.4	9.8	3.5	8.3
	M	7	2:42	9:22	15:40	21:47
			1.8	10.6	2.1	9.8
P	Tu	8	3:45	10:10	16:18	22:33
			1.1	11.3	0.8	11.2
E	W	9	4:33	10:50	16:55	23:18
			0.5	12.0	−0.4	12.3
●	Th	10	5:17	11:28	17:30	. . .
			0.0	12.5	−1.3	. . .
	F	11	0:00	5:57	12:07	18:05
			13.1	0.2	12.5	−1.8
	S	12	0:41	6:36	12:42	18:40
			13.4	0.6	12.2	−1.8
	S	13	1:20	7:13	13:17	19:14
			13.2	1.4	11.5	−1.5
	M	14	2:00	7:50	13:50	19:48
			12.6	2.4	10.6	−0.7
	Tu	15	2:41	8:30	14:25	20:22
			11.7	3.5	9.5	0.3
S	W	16	3:24	9:13	15:00	20:55
			10.7	4.6	8.3	1.5
	Th	17	4:10	10:12	15:40	21:35
			9.7	5.8	7.2	2.7
☽	F	18	5:06	12:20	16:42	22:37
			8.9	5.8	6.3	3.8
A	S	19	6:25	14:25	19:02	. . .
			8.4	4.7	6.3	. . .
	S	20	0:47	7:58	15:10	21:00
			4.3	8.5	4.0	6.8
	M	21	2:26	8:58	15:33	21:43
			4.1	8.9	3.4	7.7
	Tu	22	3:17	9:35	15:52	22:13
			3.6	9.3	2.5	8.8
E	W	23	3:52	10:07	16:16	22:48
			3.0	9.9	1.5	10.0
	Th	24	4:27	10:37	16:42	23:12
			2.3	10.5	0.5	11.0
	F	25	5:00	11:10	17:08	23:45
			1.9	10.9	−0.5	11.9
○	S	26	5:33	11:42	17:40	. . .
			1.7	11.1	−1.3	. . .
	S	27	0:20	6:08	12:14	18:10
			12.5	1.7	11.1	−1.7
	M	28	0:57	6:45	12:48	18:45
			12.9	2.1	10.8	−1.8
	Tu	29	1:37	7:23	13:23	19:21
			12.8	2.6	10.3	−1.4
N	W	30	2:20	8:07	14:02	20:00
			12.4	3.3	9.6	−0.7
	Th	31	3:07	8:50	14:46	20:46
			11.7	4.0	8.8	0.4

NOVEMBER

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	3:59	9:55	15:43	21:46
			10.9	4.5	8.0	1.6
☾	S	2	5:02	11:32	17:06	23:15
			10.2	4.4	7.5	2.6
P	S	3	6:20	13:10	18:57	. . .
			9.7	3.7	7.6	. . .
	M	4	1:05	7:38	14:15	20:30
			3.0	9.7	2.7	8.8
	Tu	5	2:33	8:45	15:05	21:30
			2.7	10.0	1.4	10.1
E	W	6	3:30	9:35	15:47	22:22
			2.2	10.6	0.3	11.3
	Th	7	4:18	10:21	16:27	23:06
			1.8	11.1	−0.7	12.3
	F	8	5:01	11:01	17:02	23:47
			1.6	11.3	−1.5	12.0
●	S	9	5:42	11:38	17:38	. . .
			1.7	11.3	−1.8	. . .
	S	10	0:26	6:20	12:15	18:13
			13.2	2.0	11.1	−1.8
	M	11	1:04	6:58	12:51	18:47
			13.1	2.5	10.6	−1.3
S	Tu	12	1:43	7:37	13:27	19:20
			12.6	3.1	9.8	−0.6
	W	13	2:20	8:16	14:03	19:56
			12.0	3.8	8.9	0.4
	Th	14	2:58	8:55	14:40	20:25
			11.2	4.3	8.0	1.5
	F	15	3:37	9:38	15:22	20:55
			10.3	4.7	7.2	2.6
A	S	16	4:18	10:52	16:17	21:38
			9.6	4.9	6.6	3.7
☽	S	17	5:07	12:32	17:45	23:07
			9.0	4.6	6.3	4.5
	M	18	6:07	13:34	19:35	. . .
			8.6	4.1	6.7	. . .
	Tu	19	1:06	7:17	14:13	20:42
			4.8	8.6	3.2	7.6
E	W	20	2:16	8:15	14:48	21:27
			4.6	8.8	2.3	8.7
	Th	21	3:07	9:07	15:21	22:07
			4.0	9.2	1.2	9.9
	F	22	3:52	9:53	16:00	22:47
			3.4	9.7	0.1	11.1
	S	23	4:33	10:32	16:34	23:25
			3.0	10.1	−1.0	12.2
○	S	24	5:14	11:10	17:10	. . .
			2.7	10.4	−1.8	. . .
	M	25	0:05	5:55	11:50	17:50
			13.0	2.5	10.6	−2.2
	Tu	26	0:47	6:38	12:31	18:30
			13.4	2.7	10.5	−2.2
N	W	27	1:28	7:23	13:14	19:10
			13.5	2.9	10.2	−1.7
P	Th	28	2:14	8:11	14:01	19:55
			13.2	3.0	9.7	−0.8
	F	29	2:58	8:58	14:52	20:45
			12.5	3.2	9.1	0.3
	S	30	3:47	9:59	15:52	21:45
			11.7	3.3	8.5	1.6

DECEMBER

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	4:40	11:13	17:07	23:05
			10.9	3.1	8.2	2.8
	M	2	5:40	12:29	18:38	. . .
			10.1	2.7	8.3	. . .
E	Tu	3	0:46	6:58	13:34	20:02
			8.5	9.7	1.9	9.0
	W	4	2:07	7:59	14:30	21:15
			8.7	9.6	1.1	10.0
	Th	5	3:12	8:59	15:18	22:11
			8.5	9.7	0.3	10.9
	F	6	4:05	9:50	16:00	22:57
			8.4	9.8	−0.5	11.8
	S	7	4:52	10:35	16:40	23:38
			8.2	10.0	−1.0	12.4
●	S	8	5:35	11:18	17:18	. . .
			8.2	10.0	−1.2	. . .
	M	9	0:16	6:15	11:58	17:55
			12.8	8.2	9.9	−1.2
S	Tu	10	0:52	6:58	12:37	18:28
			12.8	8.3	9.7	−0.8
	W	11	1:27	7:32	13:15	19:00
			12.6	8.4	9.2	−0.2
	Th	12	2:02	8:06	13:50	19:32
			12.2	8.5	8.7	0.5
	F	13	2:35	8:40	14:27	20:03
			11.7	8.7	8.2	1.4
A	S	14	3:07	9:12	15:05	20:37
			11.0	8.7	7.7	2.3
	S	15	3:40	9:55	15:52	21:12
			10.4	8.8	7.3	3.2
	M	16	4:13	10:45	16:47	22:00
			9.9	8.6	7.0	4.0
☽	Tu	17	4:58	11:42	17:55	23:15
E			9.4	8.3	7.0	4.7
	W	18	5:47	12:40	19:07	. . .
			8.9	8.3	7.5	. . .
	Th	19	0:52	6:45	13:36	20:28
			5.0	8.7	2.1	8.4
	F	20	2:35	7:50	14:27	21:32
			5.0	8.7	1.1	9.4
	S	21	3:17	8:56	15:18	22:23
			4.6	8.9	0.0	10.9
	S	22	4:12	9:56	16:05	23:10
			4.0	9.3	−1.0	12.2
	M	23	5:01	10:48	16:52	23:54
			3.6	9.8	−1.8	13.2
N	Tu	24	5:50	11:38	17:35	. . .
○			3.1	10.2	−2.2	. . .
	W	25	0:37	6:35	12:25	18:20
			13.8	2.6	10.5	−2.2
P	Th	26	1:20	7:22	13:15	19:08
			14.0	2.3	10.5	−1.8
	F	27	2:08	8:07	14:02	19:53
			13.8	1.9	10.5	−1.0
	S	28	2:45	8:52	14:58	20:45
			13.3	1.7	10.1	0.1
	S	29	3:28	9:43	15:48	21:38
			12.5	1.7	9.7	1.5
E	M	30	4:13	10:39	16:51	22:45
			11.5	1.6	9.2	2.9
☾	Tu	31	5:05	11:40	18:05	. . .
			10.5	1.6	8.9	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:39 3.5	6:53 6.2	14:12 —1.1	21:32 6.5
	Tu	2	2:46 3.4	7:54 6.4	15:03 —1.9	22:26 7.2
	W	3	3:47 3.3	8:54 6.6	15:55 —2.5	23:15 7.8
N ○ P	Th	4	4:42 2.8	9:54 6.8	16:47 —2.8	23.55 8.3
	F	5	5:31 2.4	10:51 6.9	17:36 —2.8	. . . . .
	S	6	0:42 8.5	6:27 2.0	11:46 6.9	18:24 —2.5
	S	7	1:18 8.6	7:19 1.6	12:40 6.7	19:11 —1.8
	M	8	2:03 8.5	8:11 1.2	13:33 6.3	19:59 —0.9
	Tu	9	2:41 8.2	9:04 0.9	14:31 5.7	20:47 0.2
E	W	10	3:20 7.7	9:58 0.7	15:36 5.1	21:39 1.4
☾	Th	11	3:58 7.2	10:55 0.5	16:55 4.7	22:38 2.6
	F	12	4:38 6.6	11:58 0.4	18:33 4.6	23:50 3.4
	S	13	5:23 6.1	12:58 0.2	20:24 5.0	. . . . .
	S	14	1:14 3.9	6:18 5.7	13:49 0.0	21:37 5.5
	M	15	2:32 4.0	7:17 5.4	14:38 —0.2	22:19 5.9
	Tu	16	3:33 3.8	8:14 5.3	15:23 —0.5	22:50 6.3
S	W	17	4:24 3.6	9:05 5.4	16:03 —0.7	23:16 6.7
A	Th	18	5:05 3.3	9:55 5.5	16:40 —0.8	23:45 7.0
●	F	19	5:40 3.0	10:39 5.6	17:18 —0.9	. . . . .
	S	20	0:14 7.2	6:11 2.7	11:21 5.8	17:44 —0.9
	S	21	0:43 7.4	6:41 2.5	11:58 5.9	18:13 —0.8
	M	22	1:11 7.5	7:11 2.1	12:34 5.9	18:41 —0.5
	Tu	23	1:37 7.5	7:41 1.8	13:09 5.7	19:09 —0.1
	W	24	2:01 7.4	8:13 1.4	13:46 5.5	19:41 0.5
E	Th	25	2:21 7.1	8:49 1.0	14:31 5.3	20:16 1.2
	F	26	2:41 6.9	9:31 0.7	15:28 5.0	20:59 2.0
☽	S	27	3:06 6.7	10:22 0.3	16:54 4.7	21:57 2.9
	S	28	3:42 6.4	11:25 0.0	18:48 4.9	23:28 3.7
	M	29	4:32 6.2	12:35 —0.4	20:20 5.6	. . . . .
	Tu	30	1:13 4.0	5:47 5.9	13:45 —1.0	21:26 6.3
N	W	31	2:34 3.8	7:25 6.0	14:48 —0.5	22:19 7.1

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:38 3.2	8:46 6.2	15:45 —2.0	23:03 7.8
P	F	2	4:35 2.5	9:56 6.6	16:38 —2.3	23:44 8.4
○	S	3	5:25 1.8	10:55 7.0	17:27 —2.3	. . . . .
	S	4	0:20 8.7	6:12 1.1	11:49 7.1	18:12 —1.9
	M	5	0:55 8.8	6:58 0.5	12:39 7.0	18:55 —1.2
E	Tu	6	1:27 8.7	7:43 0.0	13:27 6.7	19:38 —0.3
	W	7	1:59 8.3	8:29 —0.2	14:17 6.2	20:21 0.8
	Th	8	2:30 7.7	9:15 —0.1	15:10 5.6	21:05 1.9
	F	9	2:59 7.1	10:02 0.1	16:10 5.0	21:54 2.9
☾	S	10	3:30 6.4	10:55 0.3	17:32 4.6	23:00 3.8
	S	11	4:06 5.7	11:57 0.5	19:52 4.7	. . . . .
	M	12	0:40 4.8	5:00 5.1	13:06 0.6	21:51 5.3
S	Tu	13	2:25 4.2	6:30 4.7	14:11 0.5	22:16 5.7
A	W	14	3:36 3.8	7:54 4.7	15:03 0.2	22:33 6.1
	Th	15	4:19 3.4	8:57 5.0	15:47 —0.1	22:55 6.6
	F	16	4:50 3.0	9:49 5.4	16:24 —0.3	23:20 7.0
	S	17	5:19 2.5	10:36 5.8	16:56 —0.5	23:46 7.4
●	S	18	5:47 2.1	11:15 6.1	17:28 —0.5	. . . . .
	M	19	0:12 7.6	6:18 1.6	11:58 6.3	17:56 —0.4
	Tu	20	0:38 7.7	6:39 1.1	12:30 6.4	18:24 —0.1
E	W	21	0:59 7.6	7:05 0.6	13:04 6.3	18:54 0.3
	Th	22	1:17 7.5	7:35 0.1	13:39 6.2	19:25 0.9
	F	23	1:34 7.3	8:05 —0.2	14:19 5.9	19:58 1.6
	S	24	1:52 7.1	8:47 —0.4	15:10 5.5	20:37 2.4
	S	25	2:18 6.8	9:37 —0.4	16:28 5.1	21:35 3.3
☽	M	26	2:54 6.4	10:44 —0.3	18:29 5.1	23:15 4.0
	Tu	27	3:47 5.9	12:04 —0.3	20:10 5.6	. . . . .
N	W	28	1:08 4.1	5:18 5.5	13:29 —0.5	21:14 6.4
	Th	29	2:31 3.6	7:31 5.6	14:37 —0.9	22:00 7.2

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	3:31 2.7	8:56 6.1	15:34 —1.3	22:40 7.8
	S	2	4:22 1.7	10:00 6.6	16:25 —1.4	23:14 8.3
○	S	3	5:08 0.8	10:56 7.1	17:12 —1.3	23:47 8.6
	M	4	5:50 0.0	11:45 7.8	17:55 —0.9	. . . . .
E	Tu	5	0:18 8.6	6:31 —0.6	12:31 7.3	18:35 —0.2
	W	6	0:47 8.4	7:10 —0.9	13:14 7.1	19:16 0.6
	Th	7	1:14 8.0	7:49 —0.9	13:57 6.6	19:54 1.5
	F	8	1:42 7.4	8:28 —0.6	14:40 6.1	20:34 2.4
	S	9	2:07 7.3	9:09 —0.2	15:30 5.4	21:19 3.2
	S	10	2:34 6.0	9:54 0.3	16:36 4.9	22:20 3.9
☾	M	11	3:01 5.3	10:52 0.8	18:24 4.6	. . . . .
S	Tu	12	0:09 4.3	3:46 4.7	12:12 1.1	21:06 5.0
A	W	13	2:21 4.1	5:58 4.3	13:34 1.1	21:21 5.5
	Th	14	3:20 3.5	7:40 4.4	14:34 0.8	21:43 6.0
	F	15	3:52 3.0	8:47 4.9	15:18 0.5	22:10 6.5
	S	16	4:18 2.4	9:37 5.4	15:55 0.3	22:37 7.0
	S	17	4:48 1.8	10:23 6.0	16:28 0.2	23:05 7.3
	M	18	5:09 1.1	11:08 6.4	17:01 0.2	23:30 7.5
● E	Tu	19	5:35 0.5	11:42 6.7	17:33 0.3	23:54 7.5
	W	20	6:02 —0.1	12:19 6.9	18:05 0.6	. . . . .
	Th	21	0:16 7.5	6:30 —0.6	12:55 6.9	18:37 1.1
	F	22	0:34 7.3	7:00 —1.0	13:32 6.8	19:12 1.6
	S	23	0:52 7.2	7:35 —1.2	14:15 6.4	19:49 2.2
	S	24	1:16 6.9	8:17 —1.0	15:09 5.9	20:37 3.0
	M	25	1:46 6.6	9:10 —0.7	16:30 5.5	21:52 3.6
N ☽	Tu	26	2:28 6.0	10:21 —0.3	18:19 5.5	23:34 4.0
	W	27	3:33 5.4	11:50 0.0	19:47 6.0	. . . . .
	Th	28	1:12 3.6	5:54 5.0	13:15 0.0	20:43 6.6
P	F	29	2:23 2.7	7:50 5.3	14:22 —0.1	21:24 7.2
	S	30	3:16 1.7	9:08 6.0	15:18 —0.2	22:01 7.7
	S	31	4:01 0.6	10:01 6.6	16:07 —0.2	22:25 8.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 3.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0h is midnight, 12h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon, ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E	M	1	4:44	10:53	16:52	23:05
			−0.3	7.1	0.1	8.1
○	Tu	2	5:22	11:38	17:35	23.35
			−1.0	7.4	0.5	8.0
	W	3	6:00	12:20	18:16	. . .
			−1.4	7.4	1.0	. . .
	Th	4	0:05	6:36	12:58	18:53
			7.7	−1.5	7.3	1.6
	F	5	0:32	7:09	13:35	19:30
			7.3	−1.3	6.8	2.2
	S	6	0:57	7:42	14:15	20:09
			6.8	−0.9	6.4	2.8
	S	7	1:23	8:16	14:59	20:53
			6.2	−0.4	5.8	3.4
S	M	8	1:49	8:54	15:58	21:59
			5.6	0.2	5.3	3.9
☾	Tu	9	2:16	9:45	17:19	23:40
			5.0	0.8	5.0	4.1
A	W	10	2:59	11:04	18:55	. . .
			4.5	1.3	5.1	. . .
	Th	11	1:37	5:24	12:34	19:58
			3.8	4.1	1.5	5.5
	F	12	2:32	7:14	13:45	20:36
			3.2	4.3	1.4	6.0
	S	13	3:01	8:23	14:32	21:11
			2.5	4.9	1.3	6.5
	S	14	3:30	9:17	15:13	21:42
			1.7	5.5	1.1	6.8
E	M	15	3:57	10:04	15:53	22:12
			0.9	6.1	1.1	7.0
	Tu	16	4:25	10:47	16:31	22:40
			0.1	6.7	1.1	7.2
●	W	17	4:55	11:27	17:08	23:06
			−0.6	7.1	1.3	7.2
	Th	18	5:26	12:09	17:46	23:32
			−1.2	7.4	1.5	7.2
	F	19	6:03	12:49	18:24	23:58
			−1.7	7.4	1.9	7.1
	S	20	6:38	13:30	19:06	. . .
			−1.9	7.2	2.3	. . .
	S	21	0:25	7:16	14:21	19:55
			6.9	−1.8	6.8	2.8
N	M	22	0:57	8:03	15:19	20:59
			6.6	−1.4	6.4	3.3
P	Tu	23	1:34	9:02	16:38	22:17
			6.1	−0.8	6.1	3.5
☽	W	24	2:30	10:15	18:56	23:44
			5.5	−0.1	6.1	3.3
	Th	25	4:10	11:37	19:06	. . .
			4.8	0.4	6.5	. . .
	F	26	1:05	6:29	12:56	19:58
			2.6	4.8	0.7	6.9
	S	27	2:07	8:01	14:02	20:40
			1.6	5.3	0.9	7.2
E	S	28	2:54	9:06	14:58	21:16
			0.6	5.9	1.1	7.4
	M	29	3:36	9:59	15:47	21:49
			−0.4	6.5	1.3	7.5
	Tu	30	4:16	10:42	16:32	22:21
			−1.1	7.0	1.6	7.4
MAY.						
○	W	1	4:53	11:28	17:15	22:58
			−1.5	7.3	1.8	7.2
	Th	2	5:29	12:07	17:56	23:24
			−1.7	7.3	2.1	6.9
	F	3	6:03	12:42	18:37	23:53
			−1.6	7.2	2.5	6.6
	S	4	6:35	13:20	19:14	. . .
			−1.3	6.9	2.8	. . .
S	S	5	0:21	7:51	13:58	19:55
			6.2	−0.9	6.5	3.2
	M	6	0:50	7:36	14:42	20:44
			5.7	−0.5	6.1	3.5
	Tu	7	1:20	8:12	15:34	21:47
			5.3	0.1	5.8	3.7
A	W	8	2:00	8:56	16:36	23:06
			4.8	0.6	5.6	3.7
☾	Th	9	3:01	10:00	17:44	. . .
			4.3	1.2	5.6	. . .
	F	10	0:27	5:00	11:19	18:43
			3.3	4.0	1.7	5.8
	S	11	1:25	6:42	12:36	19:28
			2.7	4.5	1.9	6.1
	S	12	2:08	7:54	13:36	20:06
			1.9	4.8	2.0	6.4
E	M	13	2:36	8:50	14:27	20:40
			1.0	5.5	2.0	6.6
	Tu	14	3:08	9:40	15:12	21:12
			0.1	6.2	2.0	6.8
	W	15	3:42	10:28	16:00	21:44
			−0.7	6.8	2.1	6.9
	Th	16	4:18	11:13	16:44	22:18
			−1.0	7.3	2.2	7.0
●	F	17	4:57	11:18	17:36	22:58
			−2.0	7.6	2.3	7.0
	S	18	5:38	12:43	18:16	23:31
			−2.3	7.6	2.5	1.0
N	S	19	6:20	13:30	19:05	. . .
P			−2.4	7.5	2.7	. . .
	M	20	0:11	7:06	14:22	20:08
			6.7	−2.1	7.3	2.9
	Tu	21	0:54	7:59	15:17	21:10
			6.4	−1.5	7.1	3.0
	W	22	1:48	8:59	16:16	22:19
			5.8	−0.8	6.9	2.8
☽	Th	23	3:04	10:04	17:17	23:32
			5.1	0.1	6.8	2.3
	F	24	4:48	11:16	18:16	. . .
			4.7	0.9	6.9	. . .
	S	25	0:39	6:33	12:28	19:05
			1.5	4.8	1.5	7.0
E	S	26	1:39	7:59	13:39	19:49
			0.6	5.3	2.0	7.0
	M	27	2:26	8:03	14:33	20:28
			−0.2	5.9	2.3	7.0
	Tu	28	3:08	9:56	15:29	21:02
			−0.9	6.4	2.5	6.9
	W	29	3:48	10:39	16:15	21:39
			−1.3	6.8	2.6	6.7
	Th	30	4:26	11:19	16:59	22:14
			−1.5	7.0	2.8	6.5
○	F	31	5:02	11:56	17:43	22:50
			−1.5	7.1	2.9	6.3
JUNE.						
	S	1	5:36	12:30	18:23	23:25
			−1.4	7.0	3.0	6.1
S	S	2	6:09	13:06	19:03	. . .
			−1.2	6.9	3.1	. . .
	M	3	0:00	6:41	13:44	19:44
			5.8	−0.9	6.7	3.2
A	Tu	4	0:35	7:11	14:25	20:31
			5.5	−0.5	6.5	3.3
	W	5	1:11	7 44	15:07	21:22
			5.2	−0.1	6.3	3.3
	Th	6	1:54	8:22	15:51	22:19
			4.8	0.5	6.2	3.1
	F	7	2:56	9.10	16:38	23:16
			4.4	1.1	6.1	2.7
☾	S	8	4:25	10:10	17:25	. . .
			4.2	1.7	6.1	. . .
E	S	9	0:10	5:57	11:21	18:10
			2.1	4.8	2.2	6.2
	M	10	0:57	7:19	12:36	18:53
			1.3	4.8	2.6	6.3
	Tu	11	1:41	8:28	13:40	19:33
			0.5	5.4	2.8	6.4
	W	12	2:22	9:19	14:39	20:13
			−0.4	6.1	2.9	6.5
	Th	13	3:04	10·12	15:30	20:55
			−1.2	6.8	2.9	6.7
	F	14	3:48	11:00	16:23	21·40
			−1.9	7.3	2.8	6.8
●	S	15	4:35	11:49	17:17	22.31
			−2.4	7.7	2.8	6.9
N	S	16	5:21	12:35	18:08	23:20
P			−2.6	7.9	2.7	6.9
	M	17	6:10	13:22	19:08	. . .
			−2.6	8.0	2.5	. . .
	Tu	18	0:12	7:00	14:09	20:07
			6.8	−2.2	7.9	2.3
	W	19	1:06	7:51	14:54	20:58
			6.4	−1.0	7.7	2.0
	Th	20	2:07	8:47	15:41	22:00
			5.8	−0.5	7.5	1.7
	F	21	3:20	9:45	16:29	23:03
			5.2	0.5	7.3	1.2
☽	S	22	4:42	10:48	17:19	. . .
E			4.9	1.5	7.0	. . .
	S	23	0:04	6:21	11:57	18:08
			0.6	4.9	2.4	6.7
	M	24	1:02	7:49	13:07	18:56
			0.1	5.2	3.0	6.5
	Tu	25	2:00	8:59	14:14	19:41
			−0.4	5.7	3.2	6.3
	W	26	2:40	9:51	15:10	20:25
			−0.7	6.2	3.3	6.1
	Th	27	3:24	10:36	16:02	21:52
			−1.0	6.5	3.3	6.0
	F	28	4:04	11:12	16:49	21:50
			−1.1	6.7	3.2	5.9
S	S	29	4:42	11:46	17:32	22:32
○			−1.1	6.8	3.2	5.9
	S	30	5:18	12:18	18:11	23:12
			−1.1	6.9	3.1	5:8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 3.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon, for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	5:52	12:52	18:48	23:51
			−1.0	7.0	3.0	5.8
A	Tu	2	6:23	13:25	19:24	. . .
			−0.8	7.0	2.9	. . .
	W	3	0:29	6:52	13:59	20:03
			5.6	−0.5	7.0	2.7
	Th	4	1:07	7:22	14:31	20:41
			5.4	−0.1	6.9	2.5
	F	5	1:49	7:55	15:01	21:22
			5.1	0.5	6.7	2.2
E	S	6	2:39	8:31	15:32	22:07
			4.8	1.1	6.5	1.8
☾	S	7	3:44	9:18	16:08	22:58
			4.5	1.8	6.3	1.4
	M	8	5:10	10:20	16:39	23:51
			4.5	2.5	6.2	0.8
	Tu	9	6:41	11:38	17:24	. . .
			4.8	3.1	6.1	. . .
	W	10	0:48	8:00	13:01	18:20
			0.1	5.3	3.5	6.1
	Th	11	1:44	9:01	14:18	19:22
			−0.6	6.0	3.5	6.3
	F	12	2:36	9:59	15:12	20:23
			−1.3	6.7	3.3	6.5
N	S	13	3:28	10:50	16:11	21:23
			−1.9	7.3	3.0	6.7
●	S	14	4:20	11:36	17:05	22:25
			−2.4	7.8	2.6	7.0
P	M	15	5:11	12:20	17:56	23:21
			−2.5	8.1	2.2	7.1
	Tu	16	6:00	13:00	18:50	. . .
			−2.4	8.4	1.7	. . .
	W	17	0:16	6:48	13:40	19:40
			7.0	−1.9	8.4	1.2
	Th	18	1:09	7:37	14:19	20:33
			6.7	−1.1	8.2	0.9
E	F	19	2:08	8:27	14:57	21:28
			6.2	−0.1	7.8	0.6
	S	20	3:12	9:19	15:37	22:24
			5.6	1.1	7.3	0.4
☽	S	21	4:25	10:17	16:19	23:22
			5.1	2.2	6.8	0.2
	M	22	5:52	11:25	17:06	. . .
			4.9	3.1	6.2	. . .
	Tu	23	0:22	7:32	12:45	18:02
			0.1	5.1	3.6	5.8
	W	24	1:23	8:56	14:08	19:04
			0.0	5.5	3.7	5.5
	Th	25	2:18	9:50	15:05	20:02
			−0.2	5.9	3.6	5.4
S	F	26	3:05	10:30	15:58	20:55
			−0.4	6.3	3.4	5.5
	S	27	3:48	10:59	16:41	21:41
			−0.5	6.5	3.2	5.6
	S	28	4:28	11:28	17:18	22:28
			−0.6	6.8	2.9	5.8
○ A	M	29	5:08	11:58	17:58	23:06
			−0.7	7.0	2.7	5.9
	Tu	30	5:35	12:26	18:24	23:45
			−0.6	7.2	2.4	6.0
	W	31	6:04	12:54	18:53	. . .
			−0.5	7.3	2.1	. . .

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:23	6:33	13:20	19:23
			6.0	−0.2	7.3	1.8
	F	2	0:59	7:00	13:45	19:53
			5.9	0.2	7.1	1.5
E	S	3	1:36	7:26	14:07	20:24
			5.6	0.7	6.9	1.2
	S	4	2:18	8:01	14:26	21:04
			5.4	1.3	6.6	0.9
	M	5	3:09	8:39	14:49	21:53
			5.1	2.1	6.4	0.6
☾	Tu	6	4:22	9:32	15:21	22:51
			4.8	2.8	6.2	0.4
	W	7	6:09	10:55	16:09	. . .
			4.8	3.5	5.9	. . .
	Th	8	0:03	7:43	12:39	17:22
			0.0	5.3	3.9	5.8
N	F	9	1:14	8:52	14:01	18:57
			−0.5	6.0	3.7	5.9
	S	10	2:20	9:49	15:07	20:19
			−1.1	6.7	3.3	6.3
	S	11	3:16	10:33	16:00	21:25
			−1.6	7.4	2.6	6.7
P	M	12	4:10	11:14	16:58	22:28
			−2.0	8.0	1.9	7.1
○	Tu	13	4:59	11:51	17:39	23:24
			−2.1	8.4	1.1	7.4
	W	14	5:47	12:29	18:28	. . .
			−1.8	8.5	0.5	. . .
E	Th	15	0:18	6:32	13:02	19:11
			7.4	−1.2	8.5	−0.1
	F	16	1:05	7:17	13:35	19:58
			7.1	−0.4	8.2	−0.3
	S	17	1:56	8:04	14:10	20:47
			6.7	0.7	7.7	−0.3
	S	18	2:50	8:51	14:42	21:37
			6.1	1.7	7.0	−0.1
☽	M	19	3:58	9:47	15:18	22:33
			5.5	2.6	6.8	0.2
	Tu	20	5:10	10:56	16:08	23:36
			5.0	3.5	5.6	0.5
	W	21	7:05	12:28	17:05	. . .
			5.0	3.9	5.0	. . .
S	Th	22	0:48	8:51	14:02	18:41
			0.7	5.4	3.8	4.8
	F	23	1:56	9:39	15:05	19:52
			0.5	5.8	3.5	4.9
	S	24	2:49	10:06	15:49	20:49
			0.3	6.1	3.0	5.2
A	S	25	3:33	10:30	16:25	21:36
			0.0	6.5	2.6	5.6
	M	26	4:09	10:55	16:55	22:19
			−0.1	6.8	2.2	6.0
	Tu	27	4:42	11:23	17:23	23:00
			−0.2	7.1	1.8	6.3
○	W	28	5:12	11:49	17:50	23:39
			−0.2	7.3	1.4	6.5
	Th	29	5:42	12:14	18:16	. . .
			0.0	7.4	1.0	. . .
E	F	30	0:14	6:10	12:36	18:41
			6.5	0.3	7.3	0.6
	S	31	0:49	6:37	12:57	19:08
			6.5	0.7	7.1	0.2

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:22	7:06	13:12	19:37
			6.3	1.2	6.6	0.0
	M	2	2:00	7:36	13:29	20:12
			6.0	1.8	6.7	−0.1
	Tu	3	2:45	8:13	13:52	20:58
			5.6	2.5	6.4	0.0
☾	W	4	3:55	9:08	14:26	22:03
			5.1	3.3	6.1	0.1
	Th	5	5:48	10:42	15:18	23:28
			5.0	3.9	5.7	0.1
N	F	6	7:33	12:37	16:51	. . .
			5.5	4.0	5.3	. . .
	S	7	0:56	8:37	13:57	19:05
			−0.1	6.2	3.5	5.5
	S	8	2:06	9:25	14:55	20:28
			−0.5	6.9	2.6	6.1
P	M	9	3:03	10:04	15:46	21:31
			−1.0	7.6	1.6	6.8
	Tu	10	3:55	10:41	16:32	22:27
			−1.2	8.1	0.6	7.3
●	W	11	4:43	11:16	17:16	23:19
			−1.1	8.4	−0.2	7.7
E	Th	12	5:28	11:48	17:58	. . .
			−0.7	8.4	−0.9	. . .
	F	13	0:06	6:11	12:19	18:39
			7.7	−0.1	8.2	−1.2
	S	14	0:51	6:54	12:49	19:20
			7.5	0.6	7.8	−1.2
	S	15	1:36	7:37	13:19	20:01
			7.1	1.5	7.2	−0.9
	M	16	2:24	8:24	13:49	20:45
			6.5	2.3	6.5	−0.3
	Tu	17	3:16	9:18	14:19	21:36
			5.8	3.1	5.8	0.3
☽	W	18	4:25	10:31	14:58	22:40
			5.2	3.8	5.0	0.9
S	Th	19	6:08	12:17	16:11	. . .
			5.0	4.0	4.4	. . .
	F	20	0:02	8:10	14:06	18:16
			1.3	5.2	3.6	4.2
	S	21	1:23	8:50	14:53	19:40
			1.2	5.7	3.1	4.5
A	S	22	2:22	9:17	15:25	20:38
			1.0	6.1	2.5	5.1
	M	23	3:05	9:42	15:54	21:25
			0.7	6.5	1.9	5.7
	Tu	24	3:40	10:09	16:20	22:07
			0.6	6.9	1.4	6.2
	W	25	4:18	10:36	16:46	22:47
			0.5	7.1	0.8	6.6
E ○	Th	26	4:45	11:03	17:11	23:25
			0.6	7.3	0.2	6.8
	F	27	5:16	11:28	17:37	. . .
			0.7	7.2	−0.3	. . .
	S	28	0:02	5:46	11:50	18:02
			7.0	1.0	7.1	−0.6
	S	29	0:36	6:16	12:08	18:30
			7.1	1.4	7.0	−0.9
	M	30	1:12	6:49	12:26	19:01
			6.9	1.8	6.8	−1.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 3.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Indian Standard, for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:51	7:25	12:47	19:38
			6.5	2.4	6.5	−0.9
	W	2	2:40	8:08	13:14	20:28
			6.0	3.0	6.2	−0.5
N	Th	3	3:54	9:19	13:58	21:36
			5.5	3.6	5.8	0.0
☾	F	4	5:39	11:04	14:56	23:07
			5.4	3.9	5.2	0.3
	S	5	7:09	12:41	17:15	. . .
			5.9	3.6	4.8	. . .
	S	6	0:38	8:08	13:52	19:24
			0.4	6.5	2.6	5.2
	M	7	1:50	8:49	14:44	20:37
			0.2	7.1	1.5	6.0
P	Tu	8	2:47	9:27	15:28	21:36
			0.0	7.6	0.4	6.8
E	W	9	3:37	10:01	16:10	22:27
			0.0	7.9	−0.6	7.4
●	Th	10	4:25	10:34	16:51	23:14
			0.2	8.0	−1.4	7.8
	F	11	5:09	11:06	17:30	23:58
			0.6	8.0	−1.8	7.9
	S	12	5:52	11:37	18:07	. . .
			1.1	7.7	−1.9	. . .
	S	13	0:39	6:34	12:07	18:44
			7.7	1.6	7.8	−1.6
	M	14	1:19	7:17	12:37	19:20
			7.8	2.2	6.7	−1.1
	Tu	15	2:00	8:05	13:05	19:57
			6.7	2.8	6.0	−0.5
S	W	16	2:50	8:57	13:36	20:38
			6.1	3.4	5.4	0.2
	Th	17	3:45	10:11	14:11	21:35
			5.5	3.8	4.7	1.0
☽	F	18	5:08	11:49	15:20	22:57
			5.2	3.8	4.1	1.5
A	S	19	6:33	13:31	17:41	. . .
			5.3	3.8	3.9	. . .
	S	20	0:25	7:35	14:17	19:17
			1.8	5.7	2.7	4.3
	M	21	1:38	8:13	14:47	20:19
			1.7	6.1	2.0	4.9
	Tu	22	2:22	8:44	15:12	21:06
			1.6	6.4	1.3	5.6
E	W	23	3:02	9:16	15:38	21:49
			1.5	6.7	0.5	6.3
	Th	24	3:39	9:45	16:05	22:31
			1.5	6.9	−0.2	6.8
	F	25	4:15	10:15	16:32	23:10
			1.5	7.0	−0.8	7.2
○	S	26	4:50	10:41	17:01	23:50
			1.6	7.0	−1.3	7.4
	S	27	5:25	11:06	17:32	. . .
			1.8	6.9	−1.6	. . .
	M	28	0:27	6:03	11:30	18:06
			7.4	2.1	6.8	−1.8
	Tu	29	1:07	6:41	11:54	18:41
			7.3	2.5	6.6	−0.7
N	W	30	1:52	7:28	12:25	19:24
			6.9	2.9	6.4	−1.4
	Th	31	2:46	8:25	13:01	20:17
			6.5	3.3	6.0	−0.8

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	3:54	9:42	13:52	21:27
			6.2	3.5	5.4	−0.1
☾	S	2	5:11	11:08	15:18	22:51
			6.1	3.3	4.7	0.6
P	S	3	6:26	12:30	17:50	. . .
			6.4	2.6	4.6	. . .
	M	4	0:16	7:21	13:32	19:33
			1.0	6.7	1.6	5.2
	Tu	5	1:27	8:05	14:22	20:40
			1.2	7.1	0.4	6.0
E	W	6	2:28	8:42	15:06	21:36
			1.3	7.4	−0.6	6.7
	Th	7	3:19	9:18	15:46	22:25
			1.4	7.5	−1.4	7.3
	F	8	4:08	9:53	16:25	23:09
			1.6	7.4	−1.9	7.6
●	S	9	4:54	10:27	17:04	23:49
			1.9	7.3	−2.1	7.7
	S	10	5:38	11:00	17:40	. . .
			2.1	7.0	−2.0	. . .
	M	11	0:27	6:21	11:34	18:15
			7.6	2.4	6.6	−1.7
S	Tu	12	1:05	7:08	12:05	18:48
			7.3	2.7	6.2	−1.2
	W	13	1:44	7:49	12:38	19:20
			6.9	3.0	5.7	−0.6
	Th	14	2:26	8:41	13:12	19:55
			6.5	3.3	5.2	0.0
	F	15	3:14	9:45	13:58	20:37
			6.1	3.5	4.6	0.7
A	S	16	4:11	10:58	15:02	21:35
			5.8	3.4	4.1	1.4
☽	S	17	5:11	12:15	16:58	22:58
			5.7	3.0	3.8	2.0
	M	18	6:10	13:12	18:35	. . .
			5.8	2.4	4.1	. . .
	Tu	19	0:19	7:00	13:50	19:47
			2.3	6.0	1.6	4.7
E	W	20	1:23	7:39	14:22	20:42
			2.5	6.2	0.8	5.4
	Th	21	2:15	8:17	14:53	21:30
			2.5	6.4	0.0	6.2
	F	22	3:01	8:50	15:24	22:15
			2.5	6.5	−0.7	6.8
	S	23	3:44	9:22	15:58	22:56
			2.5	6.6	−1.4	7.2
○	S	24	4:28	9:57	16:33	23:41
			2.5	6.7	−1.9	7.5
	M	25	5:11	10:30	17:12	. . .
			2.5	6.7	−2.2	. . .
	Tu	26	0:23	5:55	11:06	17:52
			7.7	2.6	6.7	−2.3
N	W	27	1:07	6:41	11:44	18:35
			7.6	2.7	6.6	−2.2
P	Th	28	2:56	7:33	12:25	19:21
			7.5	2.8	6.3	−1.7
	F	29	2:42	8:34	13:15	20:15
			7.3	2.8	5.8	−1.0
	S	30	3:35	9:41	14:23	21:18
			7.1	2.7	5.2	−0.1

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	4:31	10:51	15:58	22:28
			6.9	2.2	4.7	0.9
	M	2	5:28	12:00	17:51	23:44
			6.9	1.5	4.6	1.7
E	Tu	3	6:22	13:01	19:28	. . .
			6.9	0.6	5.1	. . .
	W	4	0:58	7:12	13:55	20:42
			2.3	6.9	−0.6	5.9
	Th	5	2:05	7:56	14:41	21:38
			2.6	6.8	−1.0	6.5
	F	6	3:04	8:36	15:23	22:26
			2.7	6.8	−1.5	7.0
	S	7	3:56	9:17	16:04	23:08
			2.8	6.6	−1.8	7.3
●	S	8	4:45	9:56	16:43	23:45
			2.8	6.4	−1.8	7.4
	M	9	5:31	10:35	17:21	. . .
			2.8	6.2	−1.7	. . .
S	Tu	10	0:20	6:13	11:13	17:56
			7.4	2.8	6.1	−1.5
	W	11	0:53	6:56	11:51	18:30
			7.3	2.9	5.8	−1.1
	Th	12	1:29	7:37	12:28	19:00
			7.2	2.9	5.6	−0.7
	F	13	2:04	8:21	13:05	19:30
			7.0	2.9	5.2	−0.2
A	S	14	2:42	9:08	13:49	20:03
			6.8	2.9	4.8	0.4
	S	15	3:20	9:58	14:47	20:39
			6.6	2.7	4.4	1.1
	M	16	4:01	10:50	16:02	21:27
			6.3	2.4	4.1	1.8
☽	Tu	17	4:43	11:44	17:36	22:35
E			6.2	1.9	4.1	2.5
	W	18	5:28	12:35	19:04	. . .
			6.1	1.3	4.5	. . .
	Th	19	0:01	6:15	13:21	20:14
			3.1	6.0	0.6	5.1
	F	20	1:21	7:03	14:04	21:10
			3.4	6.0	−0.2	5.9
	S	21	2:24	7:47	14:45	22:01
			3.4	6.1	−0.9	6.5
	S	22	3:18	8:33	15:29	22:50
			3.3	6.2	−1.6	7.1
	M	23	4:10	9:20	16:13	23:34
			3.2	6.4	−2.1	7.6
N	Tu	24	5:04	10:10	17:00	. . .
○			3.0	6.6	−2.5	. . .
	W	25	0:18	5:49	11:00	17:45
			8.0	2.7	6.7	−2.6
P	Th	26	1:00	6:38	11:50	18:31
			8.0	2.5	6.7	−2.3
	F	27	1:41	7:30	12:40	19:19
			8.2	2.1	6.5	−1.8
	S	28	2:21	8:24	13:35	20:05
			8.1	1.8	6.1	−0.9
	S	29	3:08	9:21	14:40	21:02
			7.9	1.4	5.6	0.2
E	M	30	3:46	10:20	15:57	22:00
			7.5	1.0	5.0	1.3
☾	Tu	31	4:29	11:20	17:33	23:09
			7.2	0.5	4.8	2.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 3.7 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Indian Standard for the meridian 82° 30′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:28 5.3	11:29 —1.6	18:53 3.6	22:46 3.0
	Tu	2	4:25 5.6	12:15 —2.3	19:40 4.1	23:56 3.0
	W	3	5:20 5.7	12:59 —2.8	20:20 4.5	. . . . .
N ○ P	Th	4	0:57 2.9	6:15 5.6	13:45 —2.8	20:59 4.9
	F	5	1:58 2.7	7:12 5.6	14:30 —3.0	21:40 5.2
	S	6	2:58 2.4	8:05 5.3	15:14 —2.6	22:18 5.4
	S	7	3:58 2.1	9:02 4.9	15:56 —1.9	22:56 5.4
	M	8	4:53 1.8	9:58 4.3	16:34 —1.0	23:35 5.4
	Tu	9	6:03 1.5	10:55 3.6	17:13 0.0	. . . . .
E	W	10	0:14 5.2	7:12 1.2	12:06 2.9	17:42 1.0
☾	Th	11	0:54 5.0	8:22 0.8	13:51 2.3	17:59 1.8
	F	12	1:35 4.8	9:36 0.4	. . . . .	. . . . .
	S	13	2:18 4.6	10:41 0.0	. . . . .	. . . . .
	S	14	3:06 4.4	11:29 —0.4	19:51 3.5	21:47 3.4
	M	15	3:54 4.3	12:02 —0.8	20:24 3.7	23:30 3.5
	Tu	16	4:42 4.3	12:27 —1.1	20:31 3.8	. . . . .
S	W	17	0:17 3.3	5:25 4.3	12:53 —1.3	20:44 4.0
A	Th	18	0:55 3.1	6:01 4.4	13:21 —1.5	21:02 4.1
●	F	19	1:32 2.8	6:39 4.4	13:51 —1.6	21:22 4.3
	S	20	2:11 2.6	7:16 4.4	14:22 —1.5	21:42 4.4
	S	21	2:43 2.3	7:55 4.4	14:54 —1.4	22:00 4.5
	M	22	3:26 2.1	8:31 4.3	15:24 —1.0	22:18 4.6
	Tu	23	4:03 1.8	9:00 4.0	15:52 —0.6	22:35 4.7
	W	24	4:43 1.6	9:51 3.8	16:14 0.0	22:55 4.8
E	Th	25	5:32 1.3	10:34 3.3	16:33 0.6	23:18 4.9
	F	26	6:32 0.9	11:32 2.7	16:45 1.2	23:50 5.0
☽	S	27	7:43 0.5	13:05 2.2	16:45 1.8	. . . . .
	S	28	0:32 5.1	9:00 —0.1	. . . . .	. . . . .
	M	29	1:27 5.1	10:11 —0.8	. . . . .	. . . . .
	Tu	30	2:40 5.1	11:11 —1.6	19:26 3.7	22:46 3.4
N	W	31	4:00 5.2	12:04 —2.2	19:40 4.3	. . . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:06 3.0	5:13 5.3	12:49 —2.6	20:06 4.7
P	F	2	1:07 2.5	6:16 5.4	13:33 —2.6	20:36 5.2
○	S	3	2:00 2.0	7:14 5.3	14:16 —2.4	21:18 5.5
	S	4	2:52 1.5	8:10 5.2	14:56 —1.9	21:41 5.6
	M	5	3:40 1.0	9:05 4.8	15:33 —1.2	22:13 5.7
E	Tu	6	4:29 0.7	10:56 4.3	16:05 —0.3	22:44 5.5
	W	7	5:17 0.5	10:47 3.6	16:30 0.6	23:14 5.3
	Th	8	6:11 0.5	11:42 2.9	16:44 1.4	23:43 5.0
	F	9	7:12 0.5	13:06 2.3	16:28 2.0	. . . . .
☾	S	10	0:11 4.6	8:24 0.4	. . . . .	. . . . .
	S	11	0:35 4.2	9:48 0.3	. . . . .	. . . . .
	M	12	1:03 3.9	11:03 0.0	21:24 3.7	. . . . .
S	Tu	13	0:21 3.6	3:00 3.7	11:42 —0.4	20:09 3.8
A	W	14	0:32 3.4	4:24 3.7	12:10 —0.7	20:04 3.9
	Th	15	0:43 3.0	5:24 3.9	12:36 —0.9	20:13 4.1
	F	16	1:04 2.6	6:07 4.1	13:04 —1.1	20:26 4.3
	S	17	1:31 2.2	6:45 4.3	13:33 —1.2	20:42 4.5
●	S	18	2:00 1.9	7:21 4.4	14:04 —1.1	20:52 4.6
	M	19	2:32 1.5	7:58 4.5	14:30 —0.9	21:13 4.8
	Tu	20	3:04 1.1	8:36 4.4	15:00 —0.5	21:28 4.9
E	W	21	3:39 0.8	9:13 4.2	15:25 —0.1	21:47 5.1
	Th	22	4:15 0.4	9:51 3.9	15:44 0.5	22:07 5.2
	F	23	4:56 0.2	10:35 3.4	15:58 1.1	22:30 5.3
	S	24	5:47 0.0	11:32 2.8	16:03 1.6	23:00 5.3
☽	S	25	6:56 —0.2	13:04 2.3	15:48 2.1	23:40 5.2
	M	26	8:19 —0.4	. . . . .	. . . . .	. . . . .
N	Tu	27	0:40 4.9	9:44 —0.8	. . . . .	. . . . .
	W	28	2:15 4.8	10:54 —1.3	19:00 4.0	23:19 3.2
	Th	29	4:00 4.6	11:48 —1.7	19:08 4.5	. . . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:19 2.4	5:21 4.8	12:34 —1.8	19:30 5.0
	S	2	1:06 1.7	6:23 5.0	13:16 —1.7	19:57 5.3
○	S	3	1:50 0.9	7:19 5.0	13:54 —1.8	20:26 5.6
	M	4	2:32 0.4	8:12 4.9	14:30 —0.8	20:56 5.7
E	Tu	5	3:13 0.0	9:01 4.6	15:01 —0.1	21:25 5.7
	W	6	3:52 —0.3	9:48 4.2	15:28 0.6	21:52 5.5
	Th	7	4:31 —0.3	10:33 3.6	15:48 1.3	22:18 5.2
	F	8	5:12 —0.2	11:20 3.0	15:56 1.8	22:39 4.8
	S	9	5:52 0.1	12:30 2.5	15:40 2.2	22:50 4.4
☾	S	10	6:55 0.3	22:41 4.1	. . . . .	. . . . .
	M	11	8:13 0.5	22:08 3.8	. . . . .	. . . . .
S	Tu	12	9:46 0.4	19:43 3.6	. . . . .	. . . . .
A	W	13	10:54 0.2	19:12 3.8	. . . . .	. . . . .
	Th	14	0:48 2.9	4:19 3.2	11:32 —0.1	19:13 4.0
	F	15	0:33 2.5	5:23 3.5	12:05 —0.4	19:22 4.2
	S	16	0:45 2.0	6:06 3.9	12:35 —0.5	19:34 4.4
	S	17	1:07 1.5	6:43 4.2	13:05 —0.5	19:48 4.6
	M	18	1:35 1.0	7:18 4.4	13:35 —0.4	20:01 4.8
● E	Tu	19	2:05 0.5	7:55 4.5	14:04 —0.1	20:18 5.0
	W	20	2:38 0.0	8:33 4.4	14:32 0.3	20:38 5.2
	Th	21	3:12 —0.4	9:14 4.2	14:57 0.8	21:00 5.4
	F	22	3:50 —0.7	9:56 3.9	15:16 1.8	21:25 5.5
	S	23	4:32 —0.9	10:45 3.4	15:32 1.8	21:53 5.4
	S	24	5:21 —0.9	11:50 3.0	15:40 2.3	22:27 5.2
	M	25	6:27 —0.8	23:08 4.8	. . . . .	. . . . .
N ☽	Tu	26	7:50 —0.6	. . . . .	. . . . .	. . . . .
	W	27	0:18 4.3	9:16 —0.6	18:03 3.8	22:22 3.2
P	Th	28	2:22 3.9	10:29 —0.7	18:03 4.3	23:32 2.4
	F	29	4:16 4.0	11:26 —0.8	18:20 4.7	. . . . .
	S	30	0:15 1.5	5:34 4.3	12:11 —0.6	18:44 5.1
	S	31	0:54 0.6	6:32 4.5	12:50 —0.3	19:10 5.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Aden Mean Local Civil, for the meridian 44° 59′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3·47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E	M	1	1:30	7:23	13:26	19:39
			−0.1	4.7	0.1	5.6
○	Tu	2	2:02	8:12	13:57	20:06
			−0.6	4.6	0.6	5.6
	W	3	2:41	8:57	14:25	20:34
			−0.9	4.4	1.1	5.5
	Th	4	3:16	9:41	14:43	21:00
			−1.0	4.0	1.5	5.3
	F	5	3:50	10:23	15:09	21:23
			−0.9	3.6	1.9	5.0
	S	6	4:24	11:08	15:21	21:39
			−0.7	3.2	2.3	4.6
	S	7	5:01	12:10	15:22	21:47
			−0.4	2.8	2.5	4.2
S	M	8	5:45	21:44	. . .	. . .
			−0.1	3.9	. . .	. . .
☾	Tu	9	6:49	21:21	. . .	. . .
			0.3	3.5	. . .	. . .
A	W	10	8:13	18:05	. . .	. . .
			0.5	3.5	. . .	. . .
	Th	11	9:30	18:01	23:58	. . .
			0.5	3.8	2.4	. . .
	F	12	3:56	10:31	18:08	23:52
			2.8	0.4	4.0	1.9
	S	13	5:09	11:16	18:18	. . .
			3.2	0.4	4.3	. . .
	S	14	0:10	5:53	11:53	18:31
			1.8	3.6	0.3	4.5
E	M	15	0:36	6:31	12:26	18:43
			0.7	4.0	0.4	4.7
	Tu	16	1:05	7:10	12:58	19:00
			0.0	4.2	0.6	5.0
●	W	17	1:37	7:51	13:28	19:23
			−0.6	4.3	0.9	5.3
	Th	18	2:12	8:34	14:00	19:50
			−1.1	4.3	1.3	5.5
	F	19	2:51	9:20	14:31	20:20
			−1.5	4.2	1.8	5.6
	S	20	3:33	10:10	15:00	20:58
			−1.7	3.9	2.2	5.5
	S	21	4:17	11:07	15:30	21:30
			−1.7	3.7	2.6	5.3
N	M	22	5:08	12:22	16:03	22:09
			−1.5	3.5	3.0	4.9
P	Tu	23	6:07	14:10	18:17	23:05
			−1.1	3.6	3.4	4.3
☽	W	24	7:25	15:44	20:58	. . .
			−0.6	3.9	3.1	. . .
	Th	25	0:40	8:45	16:26	22:27
			3.6	−0.3	4.3	2.3
	F	26	2:48	9:53	16:59	23:20
			3.3	0.1	4.6	1.4
	S	27	4:35	10:54	17:25	. . .
			3.5	0.4	5.0	. . .
E	S	28	0:00	5:44	11:34	17:54
			0.5	3.8	0.7	5.2
	M	29	0:34	6:42	12:18	18:25
			−0.3	4.1	1.1	5.4
	Tu	30	1:12	7:27	12:51	18:55
			−0.8	4.2	1.5	5.4
MAY.						
○	W	1	1:39	8:13	13:20	19:15
			−1.2	4.2	1.8	5.4
	Th	2	2:12	8:57	13:46	19:45
			−1.4	4.0	2.1	5.2
	F	3	2:43	9:40	14:12	20:10
			−1.4	3.8	2.3	5.0
	S	4	3:16	10:21	14:39	20:34
			−1.3	3.6	2.5	4.7
S	S	5	3:50	11:04	15:10	20:54
			−1.1	3.4	2.7	4.4
	M	6	4:25	12:00	15:46	21:12
			−0.7	3.3	2.9	4.0
A	Tu	7	5:06	13:21	16:41	21:32
			−0.4	3.3	3.1	3.7
	W	8	5:54	14:57	19:41	21:52
			0.0	3.4	3.1	3.2
☾	Th	9	7:00	15:53	. . .	. . .
			0.5	3.6	. . .	. . .
	F	10	8:08	16:20	22:31	. . .
			0.7	3.8	2.1	. . .
	S	11	2:52	9:14	16:40	23:00
			2.6	0.9	4.0	1.5
	S	12	4:33	10:10	16:57	23:31
			2.9	1.1	4.3	0.7
E	M	13	5:32	11:00	17:14	. . .
			3.3	1.2	4.6	. . .
	Tu	14	0:00	6:20	11:39	17:35
			−0.1	3.6	1.4	5.0
	W	15	0:35	7:04	12:18	18:02
			−0.8	3.9	1.6	5.3
	Th	16	1:13	7:53	12:53	18:37
			−1.5	4.1	1.9	5.6
●	F	17	1:52	8:42	13:34	19:12
			−2.0	4.2	2.2	5.7
	S	18	2:36	9:35	14:18	19:52
			−2.3	4.2	2.5	5.7
N	S	19	3:21	10:27	15:10	20:40
P			−2.4	4.2	2.8	5.4
	M	20	4:08	11:23	16:13	21:25
			−2.2	4.2	3.0	5.0
	Tu	21	5:00	12:23	17:38	22:17
			−1.8	4.3	3.0	4.4
	W	22	5:55	13:25	19:24	23:27
			−1.2	4.4	2.8	3.7
☽	Th	23	6:56	14:22	20:50	. . .
			−0.4	4.5	2.2	. . .
	F	24	1:07	8:08	15:11	22:02
			3.2	0.3	4.7	1.4
	S	25	3:02	9:09	15:54	22:57
			3.0	0.9	4.9	0.6
F	S	26	4:47	10:10	16:35	23:39
			3.1	1.5	5.0	−0.2
	M	27	6:00	11:00	17:05	. . .
			3.4	1.9	5.1	. . .
	Tu	28	0:14	6:53	11:41	17:34
			−0.8	3.7	2.3	5.2
	W	29	0:46	7:42	12:14	18:05
			−1.2	3.8	2.5	5.2
	Th	30	1:17	8:26	12:44	18:33
			−1.4	3.8	2.7	5.1
○	F	31	1:49	9:06	13:14	19:00
			−1.5	3.8	2.8	4.9
JUNE.						
	S	1	2:16	9:44	13:53	19:31
			−1.5	3.8	2.8	4.7
S	S	2	2:51	10:18	14:35	20:00
			−1.4	3.8	2.9	4.5
	M	3	3:26	10:55	15:23	20:35
			−1.2	3.8	2.9	4.2
A	Tu	4	4:00	11:33	16:20	21:15
			−1.0	3.8	2.9	3.9
	W	5	4:36	12:14	17:27	21:42
			−0.6	3.8	2.8	3.5
	Th	6	5:18	12:53	18:54	22:27
			−0.2	3.8	2.6	3.2
	F	7	6:03	13:32	20:07	23:39
			0.3	3.9	2.3	2.7
☾	S	8	6:55	14:07	21:09	. . .
			0.8	4.0	1.7	. . .
E	S	9	1:37	7:58	14:40	22:02
			2.5	1.3	4.2	1.0
	M	10	3:41	8:51	15:16	22:47
			2.6	1.7	4.5	0.2
	Tu	11	5:16	9:51	15:54	23:29
			2.9	2.0	4.9	−0.6
	W	12	6:17	10:46	16:35	. . .
			3.3	2.3	5.2	. . .
	Th	13	0:09	7:10	11:39	17:18
			−1.4	3.6	2.5	5.5
	F	14	0:54	8:01	12:30	18:03
			−2.1	3.9	2.6	5.7
●	S	15	1:38	8:50	13:26	18:50
			−2.6	4.2	2.8	5.7
N	S	16	2:23	9:37	14:26	19:42
P			−2.8	4.5	2.8	5.6
	M	17	3:10	10:21	15:31	20:36
			−2.7	4.7	2.7	5.3
	Tu	18	3:57	11:06	16:37	21:34
			−2.3	4.9	2.5	4.8
	W	19	4:45	11:52	17:50	22:33
			−1.7	4.9	2.2	4.2
	Th	20	5:33	12:37	19:07	23:42
			−0.9	5.0	1.8	3.5
☽	F	21	6:23	13:23	20:18	. . .
			0.0	5.0	1.3	. . .
E	S	22	1:12	7:15	14:09	21:26
			3.0	0.9	4.9	0.7
	S	23	3:04	8:11	14:51	22:29
			2.7	1.7	4.9	0.1
	M	24	5:12	9:09	15:34	23:19
			2.9	2.4	4.8	−0.4
	Tu	25	6:37	10:15	16:15	23:58
			3.2	2.8	4.8	−0.8
	W	26	7:31	11:15	16:54	. . .
			3.4	3.1	4.8	. . .
	Th	27	0:31	8:12	11:55	17:29
			−1.1	3.6	3.1	4.7
	F	28	1:01	8:42	12:33	18:03
			−1.3	3.7	3.1	4.6
S	S	29	1:29	9:10	13:14	18:38
○			−1.4	3.8	3.0	4.6
	S	30	2:00	9:36	13:57	19:15
			−1.4	3.9	2.9	4.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the Chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Aden Mean Local Civil, for the meridian 44° 59′ E.: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:32 −1.4	10:00 4.0	14:43 2.7	19:53 4.3
A	Tu	2	3:05 −1.2	10:27 4.1	15:29 2.6	20:31 4.1
	W	3	3:39 −1.0	10:52 4.2	16:14 2.4	21:10 3.9
	Th	4	4:11 −0.6	11:16 4.2	17:02 2.2	21:49 3.7
	F	5	4:44 −0.2	11:39 4.3	17:52 2.0	22:32 3.3
E	S	6	5:14 0.3	12:04 4.3	18:56 1.7	23:26 2.9
☾	S	7	5:48 0.9	12:33 4.4	20:00 1.2	. . . . .
	M	8	0:48 2.5	6:16 1.5	13:10 4.6	21:05 0.6
	Tu	9	2:52 2.3	7:00 2.1	13:56 4.8	22:06 −0.2
	W	10	5:47 2.6	8:14 2.5	14:49 5.0	23:00 −1.0
	Th	11	6:46 3.1	9:54 2.9	15:48 5.2	23:51 −1.7
	F	12	7:25 3.6	11:19 3.0	16:49 5.4	. . . . .
N	S	13	0:39 −2.3	8:02 4.1	12:27 2.9	17:47 5.6
●	S	14	1:23 −2.6	8:40 4.5	13:29 2.6	18:45 5.6
P	M	15	2:10 −2.7	9:16 4.9	14:30 2.3	19:44 5.5
	Tu	16	2:56 −2.5	9:54 5.2	15:28 1.9	20:43 5.2
	W	17	3:40 −2.0	10:31 5.3	16:26 1.5	21:40 4.7
	Th	18	4:23 −1.2	11:08 5.4	17:24 1.2	22:36 4.1
E	F	19	5:03 −0.3	11:46 5.3	18:26 0.9	23:40 3.5
	S	20	5:39 0.7	12:25 5.1	19:33 0.6	. . . . .
☽	S	21	1:02 2.9	6:14 1.6	13:05 4.9	20:42 0.4
	M	22	3:09 2.6	6:38 2.4	13:50 4.6	21:53 0.1
	Tu	23	14:37 4.4	23:00 −0.3	. . . . .	. . . . .
	W	24	8:08 3.4	9:34 3.3	15:32 4.3	23:45 −0.6
	Th	25	8:06 3.6	11:33 3.3	16:30 4.2	. . . . .
S	F	26	0:18 −0.8	8:17 3.7	12:17 3.2	17:19 4.2
	S	27	0:46 −1.0	8:31 3.8	12:50 3.0	18:00 4.2
	S	28	1:12 −1.1	8:45 4.0	13:23 2.7	18:39 4.3
○ A	M	29	1:42 −1.2	9:03 4.1	13:58 2.4	19:16 4.3
	Tu	30	2:10 −1.1	9:23 4.2	14:34 2.1	19:55 4.3
	W	31	2:43 −1.0	9:43 4.4	15:10 1.8	20:32 4.3

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:14 −0.7	10:00 4.4	15:46 1.6	21:08 4.1
	F	2	3:42 −0.4	10:20 4.5	16:22 1.3	21:45 3.9
E	S	3	4:07 0.1	10:36 4.6	17:05 1.1	22:23 3.5
	S	4	4:27 0.7	10:57 4.7	17:56 0.9	23:12 3.0
	M	5	4:39 1.2	11:27 4.8	19:00 0.6	. . . . .
☾	Tu	6	0:21 2.5	4:45 1.8	12:00 4.9	20:13 0.2
	W	7	2:33 2.3	4:05 2.2	12:51 4.9	21:30 −0.4
	Th	8	14:00 4.9	22:40 −1.0	. . . . .	. . . . .
N	F	9	7:10 3.4	9:58 3.2	15:28 4.9	23:34 −1.6
	S	10	7:13 3.9	11:32 2.9	16:42 5.1	. . . . .
	S	11	0:22 −2.1	7:36 4.4	12:34 2.4	17:50 5.3
P ●	M	12	1:10 −2.2	8:05 4.8	13:28 1.8	18:52 5.4
	Tu	13	1:50 −2.1	8:37 5.2	14:19 1.3	19:46 5.4
	W	14	2:35 −1.7	9:11 5.5	15:09 0.8	20:45 5.1
E	Th	15	3:14 −1.1	9:46 5.6	15:57 0.4	21:38 4.7
	F	16	3:52 −0.3	10:18 5.5	16:45 0.2	22:32 4.1
	S	17	4:25 0.5	10:50 5.3	17:37 0.1	23:29 3.5
	S	18	4:50 1.4	11:23 5.0	18:36 0.2	. . . . .
☽	M	19	0:44 2.8	5:00 2.1	11:57 4.6	19:45 0.2
	Tu	20	12:30 4.2	21:04 0.2	. . . . .	. . . . .
	W	21	13:22 3.8	22:34 0.1	. . . . .	. . . . .
S	Th	22	7:41 3.6	12:07 3.4	15:05 3.6	23:25 −0.2
	F	23	7:30 3.7	12:30 3.1	16:28 3.6	23:57 −0.3
	S	24	7:35 3.9	12:40 2.7	17:37 3.7	. . . . .
A	S	25	0:25 −0.5	7:45 4.0	12:53 2.3	18:07 4.0
	M	26	0:50 −0.6	7:58 4.2	13:14 1.9	18:43 4.2
○	Tu	27	1:17 −0.7	8:14 4.3	13:41 1.5	19:18 4.3
	W	28	1:47 −0.7	8:31 4.5	14:10 1.2	19:52 4.4
	Th	29	2:14 −0.5	8:48 4.6	14:41 0.8	20:30 4.4
E	F	30	2:43 −0.2	9:10 4.7	15:12 0.5	21:00 4.3
	S	31	3:54 0.3	9:20 4.8	15:48 0.3	21:39 4.0

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:30 0.8	9:41 4.9	16:25 0.2	22:18 3.6
	M	2	3:49 1.3	10:05 5.0	17:10 −0.1	23:06 3.0
	Tu	3	4:00 1.8	10:30 5.0	18:12 −0.1	. . . . .
☾	W	4	0:21 2.6	3:45 2.2	11:05 4.9	19:31 −0.2
	Th	5	12:00 4.6	20:57 −0.5	. . . . .	. . . . .
N	F	6	13:35 4.4	22:15 −0.9	. . . . .	. . . . .
	S	7	6:26 3.8	10:43 3.0	15:25 4.4	23:25 −1.2
	S	8	6:33 4.3	11:46 2.3	16:54 4.6	. . . . .
P	M	9	0:05 −1.4	6:55 4.8	12:32 1.5	18:00 5.0
	Tu	10	0:47 −1.4	7:20 5.2	13:15 0.7	18:59 5.2
●	W	11	1:28 −1.1	7:51 5.5	13:59 0.0	19:50 5.2
E	Th	12	2:06 −0.6	8:22 5.7	14:42 −0.4	20:42 5.0
	F	13	2:49 0.1	8:54 5.6	15:24 −0.7	21:32 4.6
	S	14	3:16 0.8	9:26 5.5	16:06 −0.7	22:21 4.1
	S	15	3:43 1.5	9:55 5.1	16:47 −0.5	23:14 3.5
	M	16	4:00 2.1	10:21 4.7	17:34 −0.2	. . . . .
	Tu	17	0:27 2.9	3:58 2.6	10:38 4.2	18:32 0.1
☽	W	18	10:25 3.8	19:49 0.4	. . . . .	. . . . .
S	Th	19	7:20 3.5	21:21 0.5	. . . . .	. . . . .
	F	20	6:34 3.7	12:55 2.8	14:44 2.9	22:35 0.4
A	S	21	6:31 3.8	12:30 2.5	16:35 3.1	23:17 0.3
	S	22	6:38 4.0	12:24 2.0	17:28 3.4	23:49 0.1
	M	23	6:49 4.2	12:31 1.6	18:06 3.8	. . . . .
	Tu	24	0:17 0.0	7:01 4.4	12:50 1.1	18:40 4.1
	W	25	0:45 0.0	7:16 4.6	13:14 0.6	19:12 4.3
E ○	Th	26	1:14 0.1	7:31 4.7	13:42 0.1	19:46 4.5
	F	27	1:43 0.3	7:48 4.8	14:11 −0.3	20:21 4.4
	S	28	2:10 0.7	8:06 5.0	14:45 −0.6	21:59 4.3
	S	29	2:35 1.1	8:29 5.1	15:19 −0.9	21:40 4.0
	M	30	2:57 1.6	8:51 5.2	15:58 −1.0	22:24 3.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Aden Mean Local civil, for the meridian 44° 59′ E.: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15.47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	3:10	9:19	16:42	23:20
			2.0	5.2	−0.9	3.2
	W	2	3:18	9:49	17:39	. . .
			2.5	5.0	−0.7	. . .
N ☾	Th	3	0:55	3:12	10:30	19:59
			2.9	2.8	4.7	−0.5
	F	4	11:30	20:30	. . .	. . .
			4.1	−0.4	. . .	. . .
	S	5	5:22	9:49	13:43	21:47
			3.7	3.1	3.7	−0.4
	S	6	5:22	11:00	15:44	22:50
			4.2	2.2	3.8	−0.4
P	M	7	5:41	11:45	17:06	23:39
			4.7	1.3	4.2	−0.4
	Tu	8	6:06	12:22	18:08	. . .
			5.1	0.3	4.6	. . .
E	W	9	0:21	6:33	13:00	19:01
			−0.1	5.5	−0.5	4.8
●	Th	10	0:59	7:03	13:37	19:51
			0.3	5.7	−1.1	4.8
	F	11	1:35	7:34	14:15	20:39
			0.8	5.7	−1.4	4.7
	S	12	2:07	8:04	14:52	21:26
			1.3	5.6	−1.5	4.5
	S	13	2:36	8:34	15:28	22:14
			1.8	5.3	−1.4	4.0
	M	14	3:02	9:00	16:04	23:04
			2.2	4.9	−1.1	3.5
	Tu	15	3:28	9:19	16:41	. . .
			2.6	4.5	−0.6	. . .
S	W	16	0:12	3:34	9:24	17:23
			3.2	2.9	4.0	−0.1
	Th	17	8:49	18:22	. . .	. . .
			3.6	0.4	. . .	. . .
☽	F	18	5:21	19:44	. . .	. . .
			3.5	0.7	. . .	. . .
A	S	19	5:13	21:08	. . .	. . .
			3.7	0.9	. . .	. . .
	S	20	5:22	12:00	16:21	22:12
			3.9	2.0	2.7	0.9
	M	21	5:34	11:50	17:18	22:51
			4.1	1.5	3.1	0.8
	Tu	22	5:50	11:59	17:57	23:34
			4.3	0.9	3.5	0.8
E	W	23	6:03	12:21	18:31	. . .
			4.5	0.3	3.9	. . .
	Th	24	0:07	6:17	12:47	19:06
			0.8	4.8	−0.3	4.2
	F	25	0:38	6:33	13:16	19:42
			1.0	5.0	−0.9	4.3
○	S	26	1:10	6:54	13:48	20:21
			1.3	5.2	−1.4	4.3
	S	27	1:39	7:17	14:24	21:04
			1.6	5.3	−1.7	4.2
	M	28	2:07	7:45	15:02	21:50
			2.0	5.4	−1.9	4.0
	Tu	29	2:35	8:16	15:43	22:41
			2.4	5.4	−1.8	3.8
N	W	30	3:04	8:50	16:29	23:45
			2.8	5.2	−1.6	3.6
	Th	31	3:42	9:30	17:23	. . .
			3.1	4.8	−1.2	. . .

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	1.14	5:31	10:19	18:33
			3.6	3.4	4.2	−0.6
☾	S	2	2:46	8:27	11:42	19:55
			3.9	3.1	3.5	−0.1
P	S	3	3:39	9:58	14:04	21:10
			4.2	2.3	3.1	0.3
	M	4	4:16	10:50	16:04	22:16
			4.6	1.3	3.3	0.6
	Tu	5	4:48	11:31	17:23	23:10
			5.0	0.3	3.8	0.9
E	W	6	5:19	12:08	18:20	23:52
			5.3	−0.6	4.1	1.3
	Th	7	5:50	12:43	19:10	. . .
			5.5	−1.3	4.4	. . .
	F	8	0:29	6:20	13:18	19:58
			1.6	5.6	−1.7	4.4
●	S	9	1:03	6:50	13:51	20:43
			2.0	5.6	−1.9	4.3
	S	10	1:34	7:19	14:24	21:28
			2.3	5.4	−1.9	4.2
	M	11	2:05	7:46	14:58	22:12
			2.6	5.1	−1.7	4.0
S	Tu	12	2:36	8:12	15:30	22:56
			2.8	4.7	−1.4	3.8
	W	13	3:12	8:32	16:03	23:48
			3.0	4.3	−1.0	3.6
	Th	14	3:59	8:45	16:39	. . .
			3.1	3.8	−0.5	. . .
	F	15	0:55	5:34	8:45	17:20
			3.6	3.2	3.4	0.1
A	S	16	2:11	18:18	. . .	. . .
			3.6	0.6	. . .	. . .
☽	S	17	3:08	19:33	. . .	. . .
			3.8	1.0	. . .	. . .
	M	18	3:45	10:55	15:30	20:44
			4.0	1.8	2.3	1.3
	Tu	19	4:12	11:01	16:52	21:47
			4.2	1.2	2.7	1.5
E	W	20	4:33	11:23	17:45	22:39
			4.4	0.5	3.1	1.6
	Th	21	4:53	11:50	18:26	23:21
			4.6	−0.3	3.5	1.8
	F	22	5:14	12:20	19:04	. . .
			4.9	−1.0	3.8	. . .
	S	23	0:00	5:39	12:54	19:46
			2.0	5.2	−1.6	4.1
○	S	24	0:36	6:10	13:29	20:30
			2.2	5.4	−2.1	4.2
	M	25	1:14	6:41	14:09	21:17
			2.5	5.6	−2.5	4.3
N	Tu	26	1:54	7:17	14:51	22:03
			2.7	5.6	−2.6	4.3
	W	27	2:43	8:00	15:34	22:51
			2.9	5.4	−2.4	4.3
P	Th	28	3:42	8:47	16:20	23:42
			3.0	5.0	−2.0	4.4
	F	29	4:58	9:39	17:09	. . .
			3.1	4.5	−1.3	. . .
	S	30	0:39	6:38	10:47	18:06
			4.4	2.8	3.8	−0.5

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	1:35	8:15	12:11	19:11
			4.6	2.2	3.1	0.3
	M	2	2:25	9:29	14:17	20:20
			4.7	1.4	2.8	1.0
E	Tu	3	3:11	10:28	16:21	21:29
			4.9	0.5	3.0	1.7
	W	4	3:58	11:14	17:47	22:32
			5.1	−0.4	3.4	2.1
	Th	5	4:32	11:54	18:45	23:24
			5.3	−1.1	3.8	2.5
	F	6	5:09	12:29	19:33	. . .
			5.3	−1.6	4.0	. . .
	S	7	0:06	5:41	13:02	20:16
			2.7	5.3	−1.9	4.1
●	S	8	0:42	6:14	13:34	20:56
			2.9	5.2	−2.0	4.2
	M	9	1:17	6:45	14:04	21:31
			3.0	5.0	−1.9	4.1
S	Tu	10	1:54	7:17	14:35	22:05
			3.0	4.8	−1.8	4.1
	W	11	2:37	7:49	15:06	22:38
			2.9	4.5	−1.5	4.1
	Th	12	3:24	8:20	15:38	23:11
			2.9	4.1	−1.1	4.1
	F	13	4:17	8:51	16:10	23:45
			2.8	3.8	−0.7	4.1
A	S	14	5:20	9:24	16:44	. . .
			2.7	3.4	−0.2	. . .
	S	15	0:20	6:41	10:04	17:20
			4.1	2.5	3.0	0.4
☽	M	16	0:56	7:57	11:04	18:08
			4.1	2.2	2.5	1.0
E	Tu	17	1:38	9:03	13:20	18:59
			4.2	1.7	2.1	1.5
	W	18	2:09	9:55	16:27	20:06
			4.3	1.0	2.3	2.0
	Th	19	2:47	10:39	17:55	21:19
			4.5	0.2	2.7	2.4
	F	20	3:27	11:19	18:42	22:26
			4.7	−0.6	3.2	2.7
	S	21	4:09	11:57	19:22	23:23
			5.0	−1.4	3.6	2.8
	S	22	4:52	12:36	20:01	. . .
			5.3	−2.1	4.0	. . .
	M	23	0:16	5:37	13:17	20:40
			2.9	5.5	−2.6	4.3
N ○	Tu	24	1:07	6:23	13:59	21:18
			2.9	5.6	−2.8	4.6
	W	25	2:03	7:12	14:41	21:56
			2.9	5.6	−2.8	4.8
P	Th	26	3:02	8:04	15:25	22:34
			2.7	5.3	−2.5	5.0
	F	27	4:08	9:00	16:08	23:13
			2.5	4.9	−2.0	5.1
	S	28	5:07	9:56	16:51	23:54
			2.2	4.3	−1.2	5.2
	S	29	6:19	10:59	17:34	. . .
			1.8	3.7	−0.2	. . .
E ☾	M	30	0:37	7:35	12:21	18:20
			5.1	1.3	3.0	0.8
	Tu	31	1:23	8:49	14:16	19:11
			5.1	0.7	2.6	1.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Aden Mean Local Civil, for the meridian 44° 59′ E.; 0^h is midnight, 12^h is noon, all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.), and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar., ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
JANUARY.						
	M	1	4:18	10:38	17:05	23:24
			1.2	3.9	0.7	3.6
	Tu	2	5:27	11:40	18:06	. . .
			1.0	4.1	0.5	. . .
	W	3	0:22	6:28	12:38	18:55
			3.9	0.8	4.3	0.3
N ○ P	Th	4	1:14	7:23	13:31	19:45
			4.2	0.5	4.4	0.1
	F	5	2:08	8:15	14:22	20:33
			4.5	0.3	4.5	—0.1
	S	6	2:50	9:03	15:10	21:22
			4.7	0.2	4.5	—0.1
	S	7	3:38	9:51	15:58	22:08
			4.8	0.2	4.5	0.0
	M	8	4:24	10:40	16:47	22:56
			4.8	0.2	4.3	0.1
	Tu	9	5:12	11:29	17:35	23:45
			4.7	0.4	4.1	0.4
E	W	10	6:01	12:21	18:29	. . .
			4.5	0.6	3.8	. . .
☾	Th	11	0:35	6:52	13:17	19:27
			0.7	4.2	0.8	3.5
	F	12	1:30	7:47	14:17	20:36
			1.0	3.9	1.0	3.3
	S	13	2:34	8:48	15:25	21:55
			1.3	3.7	1.2	3.1
	S	14	3:47	9:55	16:34	23:13
			1.5	3.6	1.2	3.1
	M	15	5:00	11:00	17:37	. . .
			1.5	3.5	1.2	. . .
	Tu	16	0:15	6:05	12:01	18:27
			3.3	1.4	3.6	1.0
S	W	17	1:00	6:57	12:51	19:08
			3.4	1.3	3.7	0.9
A	Th	18	1:35	7:38	13:35	19:45
			3.6	1.1	3.8	0.7
●	F	19	2:05	8:12	14:12	20:20
			3.8	1.0	3.9	0.6
	S	20	2:33	8:45	14:43	20:51
			4.0	0.8	3.9	0.5
	S	21	3:04	9:15	15:13	21:20
			4.2	0.7	4.0	0.4
	M	22	3:34	9:45	15:48	21:50
			4.4	0.6	4.0	0.4
	Tu	23	4:05	10:15	16:13	22:20
			4.4	0.5	4.0	0.4
E	W	24	4:38	10:48	16:44	22:51
			4.4	0.5	3.9	0.6
	Th	25	5:13	11:27	17:20	23:25
			4.4	0.6	3.8	0.7
	F	26	5:52	12:08	17:57	. . .
			4.2	0.7	3.7	. . .
☽	S	27	0:02	6:35	12:57	18:47
			0.9	4.0	0.9	3.5
	S	28	0:52	7:28	13:56	19:50
			1.2	3.8	1.1	3.3
	M	29	1:57	8:35	15:13	21:23
			1.4	3.6	1.2	3.1
	Tu	30	3:34	10:01	16:38	23:02
			1.5	3.5	1.1	3.3
N	W	31	5:15	11:27	17:52	. . .
			1.4	3.7	0.9	. . .
FEBRUARY.						
	Th	1	0:18	6:30	12:37	18:52
			3.7	1.0	4.0	0.5
P	F	2	1:13	7:26	13:33	19:42
			4.1	0.6	4.3	0.1
○	S	3	2:00	8:15	14:21	20:30
			4.6	0.2	4.6	—0.2
	S	4	2:45	8:58	15:05	21:13
			4.9	—0.1	4.7	—0.3
	M	5	3:25	9:40	15:57	21:54
			5.1	—0.2	4.8	—0.3
E	Tu	6	4:06	10:20	16:46	22:33
			5.1	—0.2	4.7	—0.2
	W	7	4:45	11:00	17:07	23:12
			5.0	0.0	4.4	0.1
	Th	8	5:25	11:41	17:47	23:50
			4.8	0.2	4.1	0.5
	F	9	6:06	12:24	18:29	. . .
			4.4	0.6	3.6	. . .
☾	S	10	0:32	6:50	13:12	19:18
			1.0	3.9	1.0	3.2
	S	11	1:20	7:42	14:12	20:27
			1.4	3.5	1.4	2.9
	M	12	2:33	8:52	15:40	22:32
			1.8	3.1	1.6	2.7
S	Tu	13	4:33	10:30	17:16	. . .
			1.9	3.0	1.6	. . .
A	W	14	0:08	6:07	11:55	18:20
			2.9	1.7	3.2	1.4
	Th	15	0:54	7:00	12:52	19:02
			3.2	1.5	3.5	1.1
	F	16	1:25	7:36	13:32	19:36
			3.6	1.1	3.7	0.8
	S	17	1:51	8:03	14:08	20:07
			3.9	0.8	3.9	0.5
●	S	18	2:18	8:30	14:32	20:35
			4.2	0.6	4.1	0.3
	M	19	2:47	8:58	14:57	21:01
			4.5	0.3	4.3	0.2
	Tu	20	3:14	9:24	15:24	21:28
			4.7	0.2	4.4	0.1
E	W	21	3:41	9:52	15:50	21:55
			4.8	0.1	4.4	0.1
	Th	22	4:11	10:20	16:20	22:23
			4.8	0.1	4.3	0.2
	F	23	4:42	11:53	16:50	22:54
			4.7	0.2	4.2	0.5
	S	24	5:16	11:30	17:25	23:30
			4.4	0.4	3.9	0.8
☽	S	25	5:53	12:15	18:08	. . .
			4.1	0.8	3.6	. . .
	M	26	0:10	6:40	13:10	19:08
			1.1	3.7	1.1	3.2
N	Tu	27	1:12	7:52	14:35	20:57
			1.5	3.3	1.4	3.0
	W	28	3:10	9:45	16:28	23:06
			1.8	3.1	1.4	3.2
	Th	29	5:22	11:31	17:55	. . .
			1.5	3.4	1.2	. . .
MARCH.						
P	F	1	0:18	6:32	12:39	18:49
			3.7	1.0	3.9	0.6
	S	2	1:07	7:21	13:30	19:35
			4.2	0.4	4.4	0.1
○	S	3	1:48	8:02	14:11	20:17
			4.7	0.0	4.7	—0.3
E	M	4	2:27	8:40	14:50	20:54
			5.1	—0.3	4.9	—0.5
	Tu	5	3:05	9:18	15:25	21:30
			5.3	—0.5	5.0	—0.4
	W	6	3:40	9:53	16:00	22:03
			5.3	—0.4	4.8	—0.2
	Th	7	4:15	10:27	16:33	22:36
			5.1	—0.2	4.5	0.1
	F	8	4:48	11:00	17:06	23:08
			4.8	0.1	4.2	0.5
	S	9	5:22	11:37	17:38	23:41
			4.3	0.5	3.7	1.0
☾	S	10	5:57	12:15	18:13	. . .
			3.8	1.0	3.3	. . .
	M	11	0:18	6:38	13:03	19:07
			1.5	3.3	1.5	2.9
S	Tu	12	1:07	7:37	14:27	21:18
			1.9	2.9	1.8	2.6
A	W	13	3:45	10:01	16:52	23:45
			2.1	2.7	1.8	2.9
	Th	14	6:00	11:52	18:08	. . .
			1.8	3.0	1.5	. . .
	F	15	0:27	6:40	12:40	18:40
			3.2	1.4	3.3	1.2
	S	16	0:55	7:08	13:12	19:12
			3.6	1.0	3.7	0.8
	S	17	1:20	7:33	13:40	19:40
			4.0	0.6	4.0	0.4
●	M	18	1:48	8:00	14:05	20:05
			4.4	0.3	4.3	0.2
E	Tu	19	2:15	8:27	14:30	20:32
			4.7	0.0	4.5	0.0
	W	20	2:43	8:54	14:57	20:58
			4.9	—0.1	4.6	—0.1
	Th	21	3:12	9:22	15:25	21:27
			5.0	—0.2	4.6	0.0
	F	22	3:42	9:52	15:55	21:58
			4.9	—0.1	4.5	0.1
	S	23	4:13	10:25	16:25	22:32
			4.7	0.1	4.3	0.4
	S	24	4:47	11:02	17:03	23:08
			4.4	0.4	4.0	0.8
	M	25	5:23	11:45	17:50	23:55
			4.0	0.8	3.6	1.2
N ☽	Tu	26	6:14	12:42	19:00	. . .
			3.5	1.3	3.2	. . .
	W	27	1:12	7:40	14:23	21:10
			1.6	3.0	1.6	3.0
P	Th	28	3:44	10:03	16:31	23:03
			1.7	3.0	1.5	3.3
	F	29	5:26	11:38	17:45	. . .
			1.3	3.5	1.0	. . .
	S	30	0:03	6:21	12:34	18:35
			3 9	0.8	4.0	0.5
	S	31	0:47	7:02	13:16	19:17
			4.4	0.3	4.4	0.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cape Town Mean Local Civil, for the meridian 18° 25′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	1:25 4.9	7:40 −0.2	13:52 4.7	19:53 −0.2
	Tu	2	2:02 5.2	8:15 −0.4	14:25 4.9	20:27 −0.3
	W	3	2:37 5.3	8:50 −0.5	14:58 4.9	21:00 −0.2
	Th	4	3:10 5.2	9:22 −0.4	15:30 4.7	21:32 −0.1
	F	5	3:42 4.9	9:53 −0.1	16:01 4.5	22:02 0.2
	S	6	4:12 4.6	10:25 0.2	16:30 4.1	22:34 0.6
	S	7	4:43 4.1	10:57 0.6	17:00 3.8	23:05 1.1
S	M	8	5:15 3.6	11:30 1.1	17:37 3.4	23:38 1.5
☾	Tu	9	5:48 3.2	12:10 1.5	18:29 3.0	. . . . .
A	W	10	0:38 1.9	6:43 2.8	13:21 1.9	20:17 2.7
	Th	11	3:05 2.1	9:27 2.6	15:47 1.9	22:30 2.9
	F	12	5:10 1.8	11:22 2.9	17:10 1.6	23:28 3.3
	S	13	5:53 1.4	12:05 3.3	17:55 1.2	. . . . .
	S	14	0:02 3.7	6:22 1.0	12:35 3.7	18:29 0.8
E	M	15	0:35 4.2	6:50 0.5	13:01 4.0	19:00 0.5
	Tu	16	1:07 4.5	7:20 0.2	13:29 4.3	19:28 0.2
●	W	17	1:38 4.8	7:50 −0.1	13:58 4.5	19:58 0.1
	Th	18	2:10 5.0	8:22 −0.2	14:28 4.6	20:29 0.0
	F	19	2:42 5.0	8:53 −0.3	15:01 4.6	21:02 0.1
	S	20	3:15 4.8	9:28 −0.2	15:34 4.5	21:40 0.2
	S	21	3:50 4.5	10:04 0.1	16:12 4.3	22:18 0.5
N P	M	22	4:30 4.2	10:45 0.5	16:57 4.0	23:03 0.9
	Tu	23	5:13 3.8	11:33 0.9	17:55 3.6	. . . . .
☽	W	24	0:06 1.3	6:16 3.3	12:43 1.4	19:22 3.3
	Th	25	1:28 1.6	8:03 3.0	14:31 1.5	21:12 3.3
	F	26	3:50 1.5	10:09 3.2	16:13 1.3	22:35 3.6
	S	27	5:05 1.1	11:23 3.6	17:20 0.9	23:32 4.1
E	S	28	5:55 0.6	12:12 4.0	18:10 0.5	. . . . .
	M	29	0:15 4.5	6:35 0.2	12:50 4.3	18:48 0.2
	Tu	30	0:55 4.8	7:11 −0.1	13:27 4.5	19:26 0.1

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:32 4.9	7:46 −0.2	14:00 4.6	20:00 0.0
	Th	2	2:07 4.9	8:19 −0.2	14:32 4.6	20:32 0.1
	F	3	2:40 4.8	8:52 −0.1	15:04 4.4	21:04 0.3
	S	4	3:12 4.6	9:24 0.1	15:34 4.2	21:36 0.6
S	S	5	3:43 4.2	9:55 0.4	16:05 4.0	22:08 0.9
	M	6	4:13 3.9	10:28 0.8	16:40 3.7	22:43 1.2
A	Tu	7	4:48 3.5	11:02 1.1	17:20 3.5	23:25 1.5
	W	8	5:28 3.1	11:47 1.5	18:15 3.2	. . . . .
☾	Th	9	0:30 1.7	6:30 2.9	12:54 1.7	19:35 3.0
	F	10	2:10 1.8	8:23 2.7	14:35 1.8	21:06 3.1
	S	11	3:46 1.6	10:07 2.9	15:58 1.6	22:12 3.4
	S	12	4:43 1.3	11:01 3.2	16:52 1.3	23:00 3.8
E	M	13	5:25 0.9	11:40 3.6	17:35 0.9	23:42 4.1
	Tu	14	6:01 0.6	12:16 3.9	18:12 0.7	. . . . .
	W	15	0:22 4.4	6:37 0.2	12:50 4.2	18:50 0.4
●	Th	16	1:00 4.7	7:18 0.0	13:26 4.4	19:27 0.3
	F	17	1:38 4.8	7:51 −0.2	14:03 4.5	20:05 0.2
	S	18	2:16 4.7	8:30 −0.2	14:42 4.5	20:47 0.3
N P	S	19	2:56 4.6	9:10 0.0	15:23 4.5	21:31 0.4
	M	20	3:40 4.3	9:53 0.2	16:10 4.3	22:18 0.6
	Tu	21	4:27 4.0	10:42 0.6	17:04 4.0	23:15 0.9
	W	22	5:24 3.7	11:40 0.9	18:08 3.8	. . . . .
☽	Th	23	0:28 1.2	6:38 3.4	12:53 1.1	19:24 3.7
	F	24	1:55 1.3	8:10 3.3	14:20 1.2	20:44 3.7
E	S	25	3:20 1.1	9:40 3.4	15:40 1.1	21:53 3.9
	S	26	4:26 0.9	10:48 3.6	16:42 0.9	22:50 4.1
	M	27	5:18 0.6	11:40 3.8	17:34 0.7	23:38 4.3
	Tu	28	6:08 0.4	12:25 4.0	18:18 0.6	. . . . .
	W	29	0:22 4.5	6:42 0.2	13:02 4.1	18:59 0.5
	Th	30	1:02 4.5	7:20 0.2	13:38 4.2	19:36 0.5
○	F	31	1:41 4.5	7:54 0.2	14:12 4.2	20:12 0.6

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	2:17 4.3	8:30 0.3	14:45 4.1	20:47 0.7
	S	2	2:51 4.1	9:08 0.4	15:17 4.0	21:24 0.8
	M	3	3:24 3.9	9:37 0.6	15:52 3.9	21:58 1.0
A	Tu	4	3:58 3.7	10:12 0.8	16:28 3.8	22:35 1.2
	W	5	4:35 3.5	10:50 1.1	17:12 3.7	23:21 1.3
	Th	6	5:19 3.3	11:32 1.3	18:00 3.5	. . . . .
	F	7	0:17 1.4	6:12 3.1	12:25 1.4	18:57 3.5
☾	S	8	1:20 1.4	7:18 3.0	13:25 1.5	19:57 3.5
E	S	9	2:26 1.4	8:30 3.0	14:30 1.5	20:57 3.6
	M	10	3:27 1.2	9:38 3.2	15:34 1.3	21:54 3.8
	Tu	11	4:22 1.0	10:36 3.4	16:31 1.1	22:47 4.0
	W	12	5:12 0.7	11:27 3.7	17:25 0.9	23:39 4.2
	Th	13	5:59 0.4	12:15 3.9	18:15 0.7	. . . . .
	F	14	0:28 4.4	6:45 0.2	13:01 4.2	19:04 0.6
● N	S	15	1:16 4.5	7:30 0.1	13:47 4.4	19:53 0.4
P	S	16	2:08 4.5	8:16 0.0	14:34 4.5	20:43 0.4
	M	17	2:50 4.4	9:03 0.1	15:22 4.5	21:32 0.4
	Tu	18	3:40 4.3	9:58 0.2	16:12 4.4	22:25 0.5
	W	19	4:32 4.1	10:45 0.4	17:05 4.4	23:21 0.6
	Th	20	5:30 3.9	11:40 0.6	18:02 4.2	. . . . .
☽	F	21	0:22 0.8	6:32 3.7	12:41 0.8	19:01 4.1
E	S	22	1:27 0.9	7:40 3.5	13:46 0.9	20:02 4.0
	S	23	2:34 0.9	8:52 3.5	14:52 1.0	21:05 4.0
	M	24	3:42 0.9	10:01 3.5	15:57 1.1	22:05 4.0
	Tu	25	4:38 0.9	11:05 3.5	16:57 1.1	23:02 4.0
	W	26	5:31 0.8	11:59 3.6	17:52 1.0	23:53 4.0
	Th	27	6:18 0.7	12:46 3.7	18:40 1.0	. . . . .
	F	28	0:42 4.0	7:00 0.6	13:26 3.8	19:26 0.9
S ○	S	29	1:27 4.0	7:40 0.6	14:01 3.9	20:05 0.9
	S	30	2:07 4.0	8:17 0.6	14:35 3.9	20:43 0.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Cape Town Mean Local Civil, for the meridian 18° 25′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
JULY.						
	M	1	2:48 3.9	8:53 0.6	15:08 4.0	21:18 0.9
A	Tu	2	3:17 3.8	9:28 0.6	15:42 4.0	21:53 0.9
	W	3	3:51 3.7	10:00 0.7	16:17 4.0	22:27 0.9
	Th	4	4:25 3.6	10:34 0.8	16:53 4.0	23:05 0.9
	F	5	5:00 3.6	11:08 0.9	17:32 4.0	23:46 1.0
E	S	6	5:38 3.5	11:46 1.0	18:13 3.9	. . . . .
☾	S	7	0:32 1.0	6:23 3.4	12:28 1.1	19:00 3.9
	M	8	1:22 1.0	7:15 3.3	13:17 1.3	19:53 3.8
	Tu	9	2:18 1.1	8:15 3.3	14:17 1.3	20:52 3.7
	W	10	3:22 1.0	9:27 3.3	15:30 1.3	21:58 3.7
	Th	11	4:27 0.9	10:42 3.4	16:46 1.2	23:04 3.9
	F	12	5:30 0.7	11:48 3.7	17:56 1.0	. . . . .
N	S	13	0:07 4.0	6:28 0.5	12:48 4.0	18:57 0.8
●	S	14	1:07 4.2	7:21 0.3	13:40 4.3	19:52 0.5
P	M	15	2:00 4.4	8:12 0.1	14:30 4.5	20:42 0.3
	Tu	16	2:49 4.5	9:00 0.0	15:17 4.7	21:30 0.2
	W	17	3:38 4.5	9:48 −0.1	16:08 4.8	22:18 0.1
	Th	18	4:25 4.4	10:35 0.0	16:50 4.8	23:06 0.2
E	F	19	5:14 4.3	11:20 0.2	17:37 4.7	23:55 0.3
	S	20	6:02 4.0	12:10 0.5	18:27 4.4	. . . . .
☽	S	21	0:46 0.6	6:55 3.7	13:00 0.8	19:17 4.1
	M	22	1:43 0.8	7:56 3.4	13:58 1.1	20:13 3.9
	Tu	23	2:45 1.1	9:08 3.2	15:07 1.4	21:18 3.6
	W	24	3:57 1.2	10:30 3.1	16:25 1.5	22:30 3.5
	Th	25	5:07 1.2	11:45 3.2	17:40 1.4	23:37 3.5
S	F	26	6:07 1.1	12:40 3.4	18:41 1.3	. . . . .
	S	27	0:35 3.6	6:53 0.9	13:22 3.6	19:28 1.1
	S	28	1:24 3.8	7:34 0.8	13:55 3.8	20:05 1.0
○ A	M	29	2:04 3.9	8:10 0.6	14:26 4.0	20:40 0.8
	Tu	30	2:37 3.9	8:43 0.5	14:57 4.2	21:08 0.7
	W	31	3:07 4.0	9:13 0.5	15:25 4.3	21:38 0.6
AUGUST.						
	Th	1	3:35 4.0	9:42 0.4	15:55 4.4	22:05 0.5
E	F	2	4:03 4.0	10:07 0.5	16:25 4.4	22:34 0.5
	S	3	4:30 3.9	10:36 0.5	16:56 4.4	23:08 0.5
	S	4	5:01 3.9	11:06 0.7	17:31 4.3	23:46 0.6
	M	5	5:37 3.7	11:40 0.9	18:10 4.1	. . . . .
☾	Tu	6	0:28 0.8	6:18 3.6	12:22 1.1	18:55 3.8
	W	7	1:20 1.0	7:12 3.4	13:17 1.4	19:55 3.6
	Th	8	2:28 1.2	8:32 3.2	14:41 1.6	21:15 3.4
N	F	9	3:55 1.2	10:15 3.2	16:27 1.5	22:45 3.5
	S	10	5:17 1.1	11:43 3.5	17:55 1.2	. . . . .
	S	11	0:05 3.8	6:23 0.7	12:45 4.0	18:58 0.7
P ●	M	12	1:07 4.2	7:17 0.3	13:35 4.4	19:48 0.3
	Tu	13	1:57 4.5	8:05 −0.1	14:20 4.8	20:33 0.0
	W	14	2:42 4.7	8:50 −0.3	15:02 5.1	21:17 −0.2
E	Th	15	3:24 4.8	9:31 −0.4	15:43 5.2	21:57 −0.3
	F	16	4:05 4.8	10:10 −0.3	16:23 5.1	22:37 −0.2
	S	17	4:44 4.6	10:50 0.0	17:02 4.9	23:18 0.1
	S	18	5:24 4.2	11:30 0.4	18:43 4.5	. . . . .
☽	M	19	0:01 0.4	6:07 3.8	12:13 0.8	18:28 4.1
	Tu	20	0:50 0.9	6:55 3.4	13:01 1.3	19:20 3.6
	W	21	1:48 1.3	8:01 3.0	14:18 1.7	20:28 3.2
S	Th	22	3:13 1.5	9:53 2.8	16:05 1.8	22:07 3.1
	F	23	4:52 1.6	11:40 3.0	17:45 1.7	23:38 3.2
	S	24	6:03 1.3	12:35 3.3	18:44 1.4	. . . . .
A	S	25	0:38 3.5	6:50 1.1	13:10 3.6	19:23 1.1
	M	26	1:21 3.7	7:24 0.8	13:39 3.9	19:52 0.8
○	Tu	27	1:53 3.9	7:55 0.5	14:05 4.2	20:18 0.5
	W	28	2:20 4.1	8:22 0.3	14:33 4.5	20:44 0.4
	Th	29	2:45 4.2	8:47 0.2	15:00 4.6	21:10 0.2
E	F	30	3:09 4.3	9:11 0.2	15:24 4.7	21:34 0.1
	S	31	3:53 4.3	9:36 0.2	15:51 4.7	22:00 0.1
SEPTEMBER.						
	S	1	4:00 4.3	10:02 0.3	16:20 4.6	22:30 0.2
	M	2	4:30 4.2	10:30 0.5	16:51 4.4	23:05 0.4
	Tu	3	5:00 4.0	11:03 0.7	17:26 4.1	23:45 0.7
☾	W	4	5:40 3.7	11:43 1.0	18:08 3.7	. . . . .
	Th	5	0:35 1.1	6:35 3.3	12:37 1.4	19:10 3.3
N	F	6	1:50 1.4	8:07 3.0	14:18 1.7	20:56 3.1
	S	7	3:41 1.5	10:20 3.1	16:40 1.6	22:54 3.3
	S	8	5:18 1.2	11:45 3.6	18:00 1.1	. . . . .
P	M	9	0:08 3.7	6:20 0.7	12:38 4.1	18:52 0.5
	Tu	10	1:08 4.2	7:08 0.2	13:20 4.6	19:35 0.0
●	W	11	1:45 4.6	7:50 −0.2	14:01 5.1	20:15 −0.3
E	Th	12	2:23 4.9	8:28 −0.4	14:40 5.3	20:53 −0.5
	F	13	3:00 5.0	9:05 −0.5	15:16 5.4	21:28 −0.5
	S	14	3:37 4.9	9:40 −0.3	15:53 5.2	22:05 −0.3
	S	15	4:12 4.7	10:17 0.0	16:28 4.9	22:40 0.0
	M	16	4:47 4.3	10:50 0.4	17:03 4.4	23:18 0.4
	Tu	17	5:22 3.9	11:27 0.9	17:41 3.9	23:59 0.9
☽ S	W	18	6:02 3.4	12:10 1.4	18:25 3.4	. . . . .
	Th	19	0:52 1.4	7:03 3.0	13:10 1.8	19:33 3.4
	F	20	2:23 1.8	9:18 2.7	15:50 2.0	22:00 2.8
A	S	21	4:39 1.8	11:22 3.0	17:43 1.7	23:40 3.0
	S	22	5:50 1.5	12:10 3.3	18:25 1.3	. . . . .
	M	23	0:30 3.5	6:27 1.1	12:40 3.7	18:55 1.0
	Tu	24	1:00 3.7	7:58 0.7	13:06 4.1	19:20 0.6
	W	25	1:27 4.0	7:24 0.5	13:32 4.4	19:44 0.3
E ○	Th	26	1:51 4.2	7:49 0.2	13:59 4.7	20:10 0.1
	F	27	2:13 4.4	8:13 0.1	14:24 4.8	20:35 −0.1
	S	28	2:38 4.5	8:38 0.0	14:50 4.9	21:02 −0.1
	S	29	3:04 4.5	9:04 0.1	15:18 4.8	21:30 −0.1
	M	30	3:32 4.5	9:33 0.2	15:47 4.6	22:00 0.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cape Town Mean Local Civil, for the meridian 18° 25′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	4:00	10:05	16:18	22:32
			4.3	0.4	4.4	0.4
	W	2	4:34	10:38	16:52	23:13
			4.1	0.7	4.0	0.7
N ☾	Th	3	5:18	11:22	17:37	. . .
			3.7	1.1	3.5	. . .
	F	4	0:02	6:22	12:32	18:48
			1.2	3.3	1.6	3.1
	S	5	1:30	8:15	14:28	21:10
			1.6	3.0	1.8	2.9
	S	6	3:44	10:21	16:50	23:04
			1.6	3.2	1.4	3.3
P	M	7	5:10	11:30	17:50	. . .
			1.1	3.8	0.8	. . .
	Tu	8	0:04	6:05	12:16	18:34
			3.8	0.6	4.4	0.3
E	W	9	0:47	6:48	12:55	19:12
			4.3	0.1	4.8	−0.1
●	Th	10	1:23	7:25	13:35	19:47
			4.7	−0.2	5.2	−0.4
	F	11	2:00	8:01	14:10	20:22
			4.9	−0.3	5.3	−0.5
	S	12	2:33	8:35	14:45	20:58
			4.9	−0.3	5.3	−0.5
	S	13	3:07	9:10	15:20	21:31
			4.8	−0.1	5.0	−0.2
	M	14	3:41	9:42	15:58	22:05
			4.6	0.2	4.6	0.1
	Tu	15	4:13	10:17	16:27	22:40
			4.2	0.6	4.2	0.5
S	W	16	4:46	10:52	17:02	23:17
			3.8	1.0	3.7	1.0
	Th	17	5:27	11:30	17:41	. . .
			3.4	1.4	3.2	. . .
☽	F	18	0:02	6:27	12:40	18:50
			1.5	3.0	1.8	2.8
A	S	19	1:22	8:22	15:17	21:40
			1.8	2.8	2.0	2.7
	S	20	3:42	10:20	17:00	23:15
			1.9	3.0	1.7	3.0
	M	21	4:58	11:14	17:41	23:55
			1.5	3.4	1.3	3.3
	Tu	22	5:42	11:48	18:10	. . .
			1.2	3.7	1.0	. . .
E	W	23	0:23	6:14	12:18	18:35
			3.6	0.8	4.1	0.6
	Th	24	0:47	6:42	12:48	19:00
			4.0	0.6	4.5	0.2
	F	25	1:12	7:09	13:18	19:30
			4.2	0.3	4.7	0.0
○	S	26	1:38	7:37	13:47	20:00
			4.4	0.2	4.9	−0.2
	S	27	2:07	8:07	14:18	20:30
			4.5	0.1	4.9	−0.2
	M	28	2:37	8:38	14:50	21:11
			4.6	0.1	4.8	−0.1
	Tu	29	3:09	9:12	15:22	21:36
			4.5	0.3	4.5	0.1
N	W	30	3:45	9:50	16:00	22:15
			4.3	0.5	4.2	0.5
	Th	31	4:30	10:32	16:42	22:59
			4.0	0.8	3.8	0.9
NOVEMBER.						
	F	1	5:20	11:30	17:37	. . .
			3.7	1.2	3.4	. . .
☾	S	2	0:00	6:37	13:00	19:10
			1.3	3.3	1.6	3.0
P	S	3	1:32	8:22	15:02	21:21
			1.5	3.3	1.5	3.1
	M	4	3:28	9:55	16:29	22:48
			1.4	3.5	1.2	3.4
E	Tu	5	4:45	10:56	17:23	23:42
			1.0	4.0	0.7	3.9
	W	6	5:38	11:45	18:07	. . .
			0.6	4.4	0.3	. . .
	Th	7	0:23	6:20	12:27	18:45
			4.2	0.3	4.7	0.0
	F	8	1:00	7:00	13:06	19:21
			4.5	0.1	4.9	−0.2
●	S	9	1:37	7:36	13:44	19:56
			4.6	0.0	5.0	−0.3
	S	10	2:10	8:11	14:19	20:30
			4.6	0.1	4.9	−0.2
	M	11	2:45	8:45	14:54	21:06
			4.5	0.2	4.7	0.0
S	Tu	12	3:18	9:21	15:28	21:40
			4.3	0.5	4.3	0.3
	W	13	3:51	9:57	16:01	22:15
			4.1	0.8	3.9	0.7
	Th	14	4:28	10:33	16:39	22:52
			3.8	1.1	3.6	1.1
	F	15	5:12	11:20	17:24	23:38
			3.5	1.4	3.2	1.4
A ☽	S	16	6:08	12:25	18:26	. . .
			3.3	1.7	2.9	. . .
	S	17	0:45	7:25	14:01	20:17
			1.7	3.1	1.8	2.7
	M	18	2:22	8:50	15:34	21:57
			1.8	3.2	1.7	2.9
	Tu	19	3:43	9:58	16:30	22:50
			1.6	3.4	1.4	3.1
E	W	20	4:37	10:42	17:10	23:27
			1.4	3.7	1.1	3.4
	Th	21	5:18	11:28	17:45	. . .
			1.1	4.0	0.7	. . .
	F	22	0:00	5:54	12:02	18:20
			3.7	0.7	4.3	0.4
	S	23	0:33	6:30	12:40	18:55
			4.0	0.6	4.5	0.1
○	S	24	1:08	7:06	13:17	19:30
			4.2	0.4	4.6	0.0
	M	25	1:42	7:43	13:54	20:07
			4.4	0.3	4.7	−0.1
N	Tu	26	2:20	8:23	14:33	20:47
			4.5	0.3	4.6	0.0
	W	27	3:00	9:06	15:13	21:28
			4.5	0.4	4.4	0.2
P	Th	28	3:44	9:51	16:00	22:13
			4.3	0.6	4.1	0.5
	F	29	4:34	10:43	16:52	23:07
			4.2	0.8	4.2	0.8
	S	30	5:32	11:48	17:55	. . .
			3.9	1.0	3.5	. . .
DECEMBER.						
☾	S	1	6:42	13:07	19:17	. . .
			3.7	1.2	3.3	. . .
	M	2	1:30	7:58	14:32	20:50
			1.2	3.7	1.2	3.3
E	Tu	3	2:54	9:12	15:47	22:10
			1.2	3.8	1.0	3.4
	W	4	4:05	10:15	16:47	23:10
			1.0	4.0	0.8	3.7
	Th	5	5:08	11:10	17:37	23:59
			0.8	4.2	0.5	3.9
	F	6	5:58	11:57	18:20	. . .
			0.6	4.4	0.3	. . .
	S	7	0:41	6:38	12:42	19:00
			4.1	0.6	4.5	0.2
●	S	8	1:20	7:19	13:23	19:37
			4.2	0.5	4.5	0.1
S	M	9	1:57	7:58	14:02	20:15
			4.2	0.5	4.4	0.2
	Tu	10	2:32	8:35	14:40	20:52
			4.2	0.6	4.3	0.3
	W	11	3:06	9:13	15:16	21:28
			4.2	0.7	4.1	0.5
	Th	12	3:42	9:51	15:51	22:03
			4.1	0.9	3.8	0.7
	F	13	4:20	10:28	16:28	22:40
			4.1	1.0	3.6	0.9
A	S	14	5:00	11:10	17:08	23:20
			3.8	1.2	3.4	1.1
	S	15	5:45	12:00	17:55	. . .
			3.7	1.3	3.2	. . .
☽	M	16	0:08	6:35	12:57	18:51
			1.3	3.6	1.4	3.0
E	Tu	17	0:57	7:30	13:57	19:57
			1.5	3.5	1.4	3.0
	W	18	1:57	8:28	14:59	21:08
			1.5	3.5	1.3	3.0
	Th	19	3:02	9:27	15:57	22:11
			1.5	3.6	1.2	3.2
	F	20	4:05	10:22	16:50	23:06
			1.4	3.8	0.9	3.4
	S	21	5:02	11:16	17:40	23:56
			1.2	4.0	0.7	3.7
	S	22	5:55	12:07	18:26	. . .
			0.9	4.2	0.4	. . .
	M	23	0:42	6:46	12:56	19:12
			4.0	0.7	4.3	0.2
N ○	Tu	24	1:28	7:35	13:44	19:57
			4.2	0.5	4.4	0.1
	W	25	2:13	8:22	14:30	20:42
			4.4	0.4	4.4	0.0
P	Th	26	3:00	9:10	15:17	21:29
			4.5	0.3	4.4	0.1
	F	27	3:47	9:58	16:04	22:17
			4.6	0.4	4.3	0.2
	S	28	4:36	10:50	16:55	23:07
			4.5	0.5	4.1	0.4
	S	29	5:27	11:45	17:50	. . .
			4.4	0.6	3.9	. . .
E ☾	M	30	0:00	6:21	12:42	18:52
			0.6	4.2	0.7	3.6
	Tu	31	1:00	7:19	13:47	20:00
			0.9	4.1	0.9	3.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 2.3 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Cape Town Mean Local Civil, for the meridian 18° 25′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	4:58 1.7	11:26 10.0	17:22 1.4	23:54 10.6
	Tu	2	5:50 0.9	12:29 10.7	18:14 0.8	. . . . .
N	W	3	0:51 11.5	6:43 0.2	13:24 11.3	19:03 0.2
☽ P	Th	4	1:42 12.2	7:32 —0.4	14:14 11.8	19:50 —0.1
	F	5	2:30 12.7	8:22 —0.6	15:02 12.0	20:37 —0.2
	S	6	3:18 13.0	9:10 —0.6	15:48 12.0	21:24 —0.1
	S	7	4:04 12.8	9:58 —0.4	16:36 11.7	22:11 0.4
	M	8	4:52 12.4	10:47 0.2	17:23 11.1	23:00 1.0
	Tu	9	5:40 11.8	11:40 0.9	18:12 10.4	23:54 1.7
E	W	10	6:32 10.9	12:37 1.8	19:06 9.8	. . . . .
☾	Th	11	0:56 2.5	7:28 10.0	13:42 2.6	20:05 9.1
	F	12	2:08 3.1	8:33 9.2	14:52 3.1	21:16 8.6
	S	13	3:24 3.4	9:51 8.7	16:04 3.3	22:32 8.6
	S	14	4:38 3.3	11:12 8.7	17:05 3.3	23:38 9.0
	M	15	5:35 3.2	12:16 9.0	17:53 3.2	. . . . .
	Tu	16	0:30 9.5	6:21 2.9	13:05 9.4	18:32 2.9
S	W	17	1:12 10.1	6:57 2.6	13:44 9.7	19:04 2.6
A	Th	18	1:48 10.5	7:29 2.2	14:18 10.0	19:32 2.2
●	F	19	2:21 10.8	7:58 1.8	14:46 10.1	20:00 1.8
	S	20	2:50 10.9	8:27 1.3	15:12 10.1	20:30 1.4
	S	21	3:19 11.0	8:58 0.9	15:36 10.2	21:00 1.1
	M	22	3:47 11.0	9:30 0.7	16:02 10.2	21:35 0.9
	Tu	23	4:16 10.9	10:06 0.6	16:32 10.3	22:10 0.9
E	W	24	4:48 10.8	10:44 0.7	17:04 10.2	22:51 1.2
	Th	25	5:23 10.5	11:26 1.1	17:45 10.0	23:38 1.6
	F	26	6:05 10.1	12:15 1.7	18:29 9.7	. . . . .
☽	S	27	0:34 2.2	6:55 9.6	13:14 2.4	19:26 9.3
	S	28	1:45 2.7	8:01 9.1	14:28 2.9	20:44 9.0
	M	29	3:11 2.9	9:32 8.8	15:50 2.9	22:17 9.1
	Tu	30	4:33 2.4	11:10 9.2	17:03 2.3	23:40 10.0
N	W	31	5:40 1.6	12:24 10.1	18:04 1.5	. . . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:44 11.2	6:37 0.7	13:20 11.1	18:57 0.7
P ○	F	2	1:36 12.3	7:30 —0.1	14:10 11.9	19:45 0.0
	S	3	2:23 13.1	8:15 —0.7	14:54 12.4	20:30 —0.4
	S	4	3:08 13.5	9:00 —0.9	15:37 12.6	21:12 —0.5
	M	5	3:50 13.4	9:42 —0.8	16:17 12.3	21:54 —0.3
E	Tu	6	4:32 13.0	10:24 —0.3	16:57 11.8	22:36 0.2
	W	7	5:14 12.2	11:05 0.5	17:37 11.0	23:18 1.0
	Th	8	6:57 11.1	11:49 1.5	18:20 10.1	. . . . .
	F	9	0:04 2.1	6:42 9.9	12:38 2.6	19:05 9.1
☾	S	10	1:00 3.1	7:35 8.8	13:39 3.6	20:03 8.3
	S	11	2:16 3.9	8:52 7.9	15:01 4.2	21:32 7.8
	M	12	3:50 4.2	10:42 7.6	16:35 4.3	23:09 3.8
S	Tu	13	5:18 4.0	12:05 8.1	17:36 4.0	. . . . .
A	W	14	0:12 8.9	6:10 3.6	12:54 8.8	18:19 3.4
	Th	15	0:56 9.6	6:46 3.0	13:30 9.5	18:52 2.8
	F	16	1:32 10.3	7:15 2.3	14:00 10.0	19:20 2.2
	S	17	2:02 10.9	7:41 1.6	14:27 10.5	19:46 1.5
●	S	18	2:31 11.3	8:10 0.9	14:51 10.8	20:15 0.8
	M	19	3:00 11.6	8:38 0.3	15:15 11.0	20:45 0.3
	Tu	20	3:26 11.7	9:10 —0.1	15:40 11.1	21:17 0.0
E	W	21	3:54 11.7	9:42 —0.2	16:08 11.2	21:50 0.0
	Th	22	4:25 11.5	10:18 0.0	16:39 11.0	22:32 0.4
	F	23	4:58 11.1	10:55 0.5	17:15 10.6	23:11 0.9
	S	24	5:37 10.5	11:40 1.4	17:56 10.1	. . . . .
☽	S	25	0:02 1.7	6:25 9.7	12:33 2.4	18:50 9.3
	M	26	1:10 2.7	7:30 9.8	13:49 3.3	20:10 8.7
N	Tu	27	2:42 3.2	9:12 8.2	15:32 3.5	22:01 8.8
	W	28	4:24 2.8	11:10 8.7	16:57 2.9	23:33 9.8
	Th	29	5:38 1.9	12:22 10.0	18:00 1.8	. . . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:35 11.2	6:32 0.8	13:15 10.2	18:50 0.8
	S	2	1:25 12.5	7:20 —0.1	13:59 12.2	19:36 —0.1
○	S	3	2:10 13.3	8:02 —0.7	14:38 12.8	20:16 —0.7
E	M	4	2:52 13.7	8:41 —1.0	15:15 12.9	20:55 —0.9
	Tu	5	3:30 13.6	9:19 —0.9	15:52 12.7	21:30 —0.6
	W	6	4:08 13.0	9:54 —0.4	16:27 12.1	22:06 —0.1
	Th	7	4:44 12.1	10:28 0.4	17:00 11.2	22:42 0.7
	F	8	5:22 10.9	11:03 1.4	17:35 10.2	23:20 1.7
	S	9	6:00 9.6	11:39 2.5	18:12 9.2	. . . . .
☾	S	10	0:03 2.9	6:41 8.5	12:22 3.7	18:58 8.2
S	M	11	1:04 4.0	7:40 7.4	13:32 4.7	20:16 7.5
	Tu	12	2:52 4.7	9:57 7.0	15:48 4.9	22:22 7.6
A	W	13	4:45 4.5	11:44 7.6	17:10 4.4	23:42 8.4
	Th	14	5:45 3.8	12:30 8.5	17:54 3.7	. . . . .
	F	15	0:29 9.3	6:19 3.0	13:02 9.3	18:26 2.8
	S	16	1:08 10.2	6:46 2.1	13:30 10.1	18:55 2.0
	S	17	1:34 11.0	7:14 1.2	13:56 10.8	19:22 1.1
●	M	18	2:03 11.6	7:42 0.4	14:20 11.3	19:51 0.3
E	Tu	19	2:31 12.0	8:12 —0.2	14:46 11.6	20:23 —0.3
	W	20	3:00 12.1	8:44 —0.6	15:14 11.8	20:56 —0.6
	Th	21	3:31 12.1	9:16 —0.6	15:44 11.7	21:30 —0.6
	F	22	4:02 11.8	9:52 —0.3	16:16 11.4	22:12 0.0
	S	23	4:40 11.2	10:30 0.4	16:58 10.8	22:52 0.6
	S	24	5:20 10.4	11:18 1.4	17:38 10.1	23:44 1.7
N	M	25	6:10 9.4	12:07 2.6	18:35 9.2	. . . . .
☽	Tu	26	0:55 2.8	7:21 8.5	13:30 3.7	20:02 8.6
	W	27	2:38 3.4	9:20 8.0	15:30 3.8	21:57 8.8
P	Th	28	4:18 2.9	11:07 8.8	16:54 2.9	23:22 10.0
	F	29	5:31 1.9	12:11 10.1	17:51 1.8	. . . . .
	S	30	0:21 11.3	6:21 0.9	12:58 11.3	18:37 0.8
	S	31	1:09 12.4	7:04 0.1	13:38 12.1	19:17 0.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it. In order to refer the above heights to the plane used upon the Portuguese Charts of Lisbon Harbor, add 1.4 feet to each. A foot is about three-tenths of a meter.

The time used is Portuguese Standard, for the meridian 9° 11′ W.: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	1:50	7:41	14:15	19:55
			13.1	−0.5	12.7	−0.5
	Tu	2	2:30	8:16	14:50	20:30
			13.3	−0.6	12.8	−0.7
	W	3	3:07	8:50	15:25	21:04
			13.0	−0.4	12.5	−0.4
	Th	4	3:42	9:22	15:56	21:37
			12.4	0.0	11.9	0.1
	F	5	4:16	9:52	16:28	22:10
			11.5	0.7	11.1	0.8
	S	6	4:50	11:22	17:01	22:44
			10.4	1.6	10.1	1.7
	S	7	5:24	10:53	17:35	23:24
			9.3	2.5	9.2	2.7
S	M	8	6:00	11:29	18:15	. . .
			8.2	3.5	8.3	. . .
☾	Tu	9	0:15	6:48	12:20	19:18
			3.7	7.4	4.5	7.6
A	W	10	1:45	8:31	14:26	21:08
			4.5	6.9	5.1	7.5
	Th	11	3:41	10:42	16:17	22:42
			4.5	7.3	4.5	8.1
	F	12	4:52	11:39	17:08	23:40
			3.8	8.2	3.7	9.1
	S	13	5:32	12:15	17:45	. . .
			2.8	9.2	2.8	. . .
	S	14	0:20	6:05	12:46	18:18
			10.1	1.9	10.1	1.7
E	M	15	0:55	6:38	13:15	18:50
			10.9	0.9	10.9	0.7
	Tu	16	1:28	7:10	13:45	19:25
			11.6	0.1	11.5	−0.1
●	W	17	2:01	7:42	14:17	19:58
			12.0	−0.4	11.9	−0.6
	Th	18	2:35	8:18	14:50	20:35
			12.1	−0.7	12.1	−0.8
	F	19	3:10	8:52	15:25	21:14
			12.0	−0.6	11.9	−0.7
	S	20	3:48	9:30	16:02	21:56
			11.6	−0.1	11.5	−0.2
	S	21	4:28	10.12	16:45	22:43
			10.9	0.7	10.9	0.7
N P	M	22	5:15	11:00	17:36	23:40
			10.1	1.7	10.1	1.7
	Tu	23	6:15	12:00	18:40	. . .
			9.2	2.8	9.4	. . .
☽	W	24	1:00	7:35	13:30	20:09
			2.7	8.5	3.7	9.0
	Th	25	2:40	9:18	15:23	21:42
			3.1	8.4	3.4	9.3
	F	26	4:07	10:47	16:38	23:00
			2.6	9.1	2.6	10.2
	S	27	5:11	11:46	17:32	23:58
			1.7	10.1	1.7	11.2
E	S	28	6:00	12:33	18:16	. . .
			1.0	11.1	1.0	. . .
	M	29	0:46	6:39	13:12	18:54
			11.9	0.5	11.8	0.4
	Tu	30	1:30	7:15	13:50	19:30
			12.3	0.2	12.2	0.0

MAY.

Moon.	Day of— W.	Mo	Time and Height of High and Low Water.			
○	W	1	2:08	7:50	14:24	20:04
			12.4	0.1	12.2	0.0
	Th	2	2:45	8:20	14:57	20:38
			12.0	0.3	11.9	0.2
	F	3	3:20	8.50	15:30	21:10
			11.4	0.7	11.4	0.6
	S	4	3:54	9:19	16:02	21:44
			10.6	1.2	10.7	1.2
S	S	5	4:26	9:49	16:35	22:18
			9.8	1.8	10.0	1.8
	M	6	4:58	10:20	17:10	22:58
			8.9	2.6	9.3	2.6
A	Tu	7	5:34	10:57	17:50	23:48
			8.2	3.3	8.6	3.3
	W	8	6:20	11:48	18:44	. . .
			7.7	4.0	8.1	. . .
☾	Th	9	0:59	7:30	13:13	20:00
			3.9	7.4	4.5	7.9
	F	10	2:28	9:01	15:01	21:21
			4.0	7.5	4.3	8.2
	S	11	3:41	10:18	16:06	22:31
			3.5	8.1	3.6	8.8
	S	12	4:36	11:10	16:54	23:23
			2.7	8.9	2.7	9.7
E	M	13	5:18	11:52	17:26	. . .
			1.8	9.9	1.7	. . .
	Tu	14	0:09	5:57	12:32	18:16
			10.5	0.9	10.7	11.3
	W	15	0:50	6:36	13:11	18:56
			11.2	0.2	11.4	−0.1
●	Th	16	1:32	7:14	13:50	19:36
			11.7	−0.3	11.9	−0.5
	F	17	2:13	7:53	14:30	20:18
			11.8	0.4	12.1	−0.7
	S	18	2:55	8:34	15:11	21:02
			11.7	−0.3	12.0	−0.5
N P	S	19	3:38	9:18	15:56	21:49
			11.4	0.2	11.7	−0.1
	M	20	4:26	10:04	16:45	22:41
			10.8	0.8	11.2	0.7
	Tu	21	5:20	10:56	17:40	23:43
			10.2	1.7	10.6	1.6
	W	22	6:23	12:02	18:46	. . .
			9.5	2.6	10.0	. . .
☽	Th	23	1:01	7:36	13:27	19:58
			2.3	9.0	3.1	9.7
	F	24	2:26	8:57	14:57	21:16
			2.5	9.0	3.0	9.8
E	S	25	3:40	10:10	16:10	22:28
			2.3	9.3	2.5	10.1
	S	26	4:42	11:12	17:04	23:29
			1.9	9.9	2.0	10.6
	M	27	5:32	12:03	17:50	. . .
			1.5	10.6	1.5	. . .
	Tu	28	0:22	6:13	12:47	18:30
			11.0	1.2	11.1	1.1
	W	29	1:09	6:50	13:26	19:08
			11.2	1.1	11.4	1.0
○	Th	30	1:50	7:22	14:02	19:42
			11.2	1.1	11.4	1.0
	F	31	2:28	7:54	14:38	20:17
			11.0	1.2	11.2	1.1

JUNE.

Moon.	Day of— W.	Mo	Time and Height of High and Low Water.			
S	S	1	3:04	8:24	15:12	20:50
			10.5	1.4	10.9	1.3
	S	2	3:38	8:54	15:45	21:24
			10.0	1.7	10.5	1.5
	M	3	4:10	9:25	16:18	22:00
			9.4	2.0	10.0	1.9
A	Tu	4	4:40	10:00	16:52	22:38
			8.9	2.4	9.6	2.2
	W	5	5:15	10:40	17:31	23:25
			8.6	2.8	9.2	2.7
	Th	6	6:57	11:26	18:16	. . .
			8.4	3.2	8.9	. . .
	F	7	0:20	6:45	12:30	19:08
			3.0	8.2	3.6	8.7
☾	S	8	1:25	7:45	13:44	20:10
			3.2	8.2	3.7	8.7
E	S	9	2:32	8:50	15:00	21:15
			3.0	8.5	3.3	8.9
	M	10	3:38	9:55	16:00	22:20
			2.6	9.0	2.7	9.4
	Tu	11	4:30	10:55	16:53	23:20
			2.0	9.6	1.8	10.0
	W	12	5:20	11:50	17:43	. . .
			1.3	10.4	1.0	. . .
	Th	13	0:18	6:06	12:40	18:30
			10.6	0.7	11.1	0.3
	F	14	1:10	6:50	13:30	19:20
			11.1	0.2	11.7	−0.2
● N	S	15	2:00	7:37	14:16	20:06
			11.4	0.0	12.1	−0.4
P	S	16	2:45	8:22	15:05	20:56
			11.6	0.0	12.3	−0.4
	M	17	3:35	9:10	15:52	21:45
			11.4	0.2	12.2	−0.2
	Tu	18	4:25	10:00	16:44	22:40
			11.2	0.7	11.9	0.4
	W	19	5:20	10:54	17:36	23:38
			10.7	1.3	11.4	1.0
	Th	20	6:14	11:54	18:33	. . .
			10.3	1.9	10.9	. . .
☽	F	21	0:42	7:15	13:05	19:34
			1.7	9.8	2.4	10.4
E	S	22	1:53	8:20	14:18	20:40
			2.1	9.4	2.7	9.9
	S	23	3:08	9:27	15:31	21:50
			2.3	9.3	2.6	9.7
	M	24	4:05	10:31	16:32	23:00
			2.4	9.4	2.5	9.7
	Tu	25	5:00	11:30	17:25	. . .
			2.3	9.8	2.3	. . .
	W	26	0:00	7:50	12:22	18:12
			9.9	2.2	10.2	2.1
	Th	27	0:52	6:28	13:08	18:52
			10.1	2.1	10.5	1.9
	F	28	1:38	7:04	13:48	19:30
			10.2	2.1	10.7	1.8
S ○	S	29	2:16	7:37	14:25	20:05
			10.2	2.0	10.8	1.7
	S	30	2:54	8:08	15:00	20:35
			10.1	1.9	10.7	1.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it. In order to refer the above heights to the plane used upon the Portuguese Charts of Lisbon Harbor, add 1.4 feet to each. A foot is about three-tenths of a meter.

The time used is Portuguese Standard, for the meridian 9° 11′ W.; 0ʰ is midnight, 12ʰ is noon: all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3.47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:25	8:36	15:30	21:06
			9.8	1.9	10.6	1.6
A	Tu	2	3:54	9:06	16:01	21:40
			9.6	1.9	10.3	1.6
	W	3	4:21	9:40	16:32	22:16
			9.4	1.9	10.1	1.6
	Th	4	4:50	10:20	17:07	22:57
			9.3	2.0	9.9	1.8
	F	5	5:25	11:01	17:40	23:41
			9.2	2.2	9.7	2.0
E	S	6	6:03	11:50	18:22	. . .
			9.2	2.5	9.5	. . .
☾	S	7	0:35	6:50	12:48	19:11
			2.3	9.1	2.7	9.3
	M	8	1:32	7:42	13:56	20:11
			2.5	9.1	2.9	9.2
	Tu	9	2:38	8:50	15:08	21:24
			2.6	9.1	2.7	9.2
	W	10	3:45	10:05	16:16	22:40
			2.4	9.3	2.2	9.4
	Th	11	4:45	11:16	17:20	23:54
			1.9	9.9	1.5	10.0
	F	12	5:44	12:20	18:16	. . .
			1.4	10.8	0.7	. . .
N	S	13	0:55	6:36	13:16	19:08
			10.7	0.7	11.6	0.1
● P	S	14	1:50	7:26	14:07	20:00
			11.3	0.2	12.3	—0.3
	M	15	2:40	8:15	14:56	20:48
			11.7	0.0	12.7	—0.6
	Tu	16	3:27	9:02	15:45	21:36
			11.9	—0.1	12.9	—0.5
	W	17	4:14	9:50	16:30	22:25
			11.9	0.1	12.7	—0.2
	Th	18	5:01	10:38	17:18	23:15
			11.5	0.5	12.2	0.4
E	F	19	5:48	11:30	18:08	. . .
			11.0	1.1	11.5	. . .
	S	20	0:10	6:38	12:25	19:00
			1.2	10.3	1.8	10.6
☽	S	21	1:08	7:34	13:30	20:00
			2.1	9.6	2.6	9.7
	M	22	2:15	8:35	14:45	21:11
			2.8	9.0	3.1	9.0
	Tu	23	3:26	9:49	16:00	22:34
			3.2	8.8	3.2	8.7
	W	24	4:36	11:05	17:10	23:48
			3.3	9.0	3.1	8.9
	Th	25	5:32	12:06	18:03	. . .
			3.2	9.4	2.9	. . .
S	F	26	0:46	6:18	12:55	18:45
			9.3	3.0	10.0	2.7
	S	27	1:31	6:54	13:36	19:20
			9.7	2.7	10.4	2.3
	S	28	2:08	7:26	14:11	19:52
			10.0	2.4	10.7	2.0
○ A	M	29	2:40	7:54	14:44	20:20
			10.1	2.0	10.9	1.6
	Tu	30	3:08	8:22	15:13	20:49
			10.1	1.7	10.9	1.3
	W	31	3:30	8:50	15:40	21:18
			10.1	1.4	10.9	1.0

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:55	9:22	16:07	21:50
			10.1	1.1	10.8	0.8
E	F	2	4:20	9:55	16:35	22:25
			10.1	1.1	10.7	0.8
	S	3	4:50	10:35	17:07	23:05
			10.1	1.2	10.4	1.1
	S	4	5:24	11:16	17:43	23:50
			10.0	1.5	10.1	1.6
	M	5	6:05	12:05	18:28	. . .
			9.8	2.0	9.7	. . .
☾	Tu	6	0:40	6:55	13:08	19:25
			2.2	9.4	2.5	9.3
	W	7	1:47	8:00	14:27	20:42
			2.8	9.1	2.9	8.8
	Th	8	3:08	9:28	16:54	22:20
			3.0	9.0	2.7	8.8
N	F	9	4:26	11:00	17:08	23:46
			2.6	9.5	1.9	9.5
	S	10	5:32	12:10	18:10	. . .
			1.9	9.6	1.0	. . .
	S	11	0:50	6:30	13:10	19:01
			10.6	1.0	11.8	0.2
P ●	M	12	1:42	7:20	13:58	19:50
			11.5	0.2	12.8	—0.5
	Tu	13	2:30	8:05	14:44	20:35
			12.2	—0.4	13.3	—0.9
	W	14	3:12	8:50	15:27	21:20
			12.5	—0.7	13.5	—1.0
E	Th	15	3:54	9:32	16:10	22:01
			12.5	—0.6	13.2	—0.6
	F	16	4:35	10:15	16:54	22:48
			12.1	—0.2	12.6	0.1
	S	17	5:16	10:58	17:37	23:27
			11.4	0.6	11.6	1.1
	S	18	6:00	11:44	18:25	. . .
			10.6	1.5	10.4	. . .
☽	M	19	0:16	6:47	12:40	19:18
			2.2	9.6	2.6	9.2
	Tu	20	1:16	7:42	13:54	20:30
			3.3	8.7	3.5	8.2
	W	21	2:38	9:04	15:29	22:12
			4.0	8.2	4.0	7.8
S	Th	22	4:15	10:40	16:58	23:42
			4.1	8.3	3.8	8.2
	F	23	5:22	11:50	17:58	. . .
			3.8	8.9	3.4	. . .
	S	24	0:38	6:10	12:40	18:38
			8.9	3.4	9.7	2.9
A	S	25	1:18	6:43	13:20	19:07
			9.5	2.8	10.3	2.3
	M	26	1:49	7:11	13:52	19:33
			10.0	2.3	10.9	1.8
○	Tu	27	2:15	7:36	14:20	19:57
			10.4	1.7	11.2	1.2
	W	28	2:40	8:02	14:46	20:23
			10.7	1.1	11.4	0.6
	Th	29	3:01	8:28	15:12	20:50
			10.8	0.6	11.4	0.2
E	F	30	3:25	9:00	15:37	21:20
			10.9	0.3	11.4	0.1
	S	31	3:48	9:30	16:05	21:54
			10.9	0.1	11.2	0.2

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:16	10:10	16:36	22:30
			10.8	0.4	10.9	0.6
	M	2	4:50	10:50	17:12	23:10
			10.6	0.9	10.4	1.2
	Tu	3	5:30	11:34	17:55	. . .
			10.1	1.6	9.8	. . .
☾	W	4	0:00	6:20	12:35	18:55
			2.2	9.5	2.4	9.0
	Th	5	1:09	7:18	14:00	20:22
			3.2	8.8	3.1	8.3
N	F	6	2:46	9:12	15:42	22:22
			3.6	8.6	3.0	8.4
	S	7	4:21	10:58	17:05	23:48
			3.1	9.4	2.1	9.5
	S	8	5:30	12:08	18:02	. . .
			2.1	10.8	1.0	. . .
P	M	9	0:44	6:20	12:55	18:50
			10.8	1.0	12.0	0.0
	Tu	10	1:30	7:08	13:42	19:35
			11.9	0.0	13.0	—0.7
●	W	11	2:10	7:50	14:25	20:15
			12.6	—0.7	13.6	—1.2
E	Th	12	2:50	8:30	15:06	20:54
			13.0	—1.1	13.7	—1.1
	F	13	3:28	9:08	15:45	21:32
			12.9	—1.0	13.2	—0.7
	S	14	4:03	9:46	16:25	22:08
			12.3	—0.4	12.3	0.1
	S	15	4:40	10:25	17:05	22:45
			11.6	0.3	11.2	1.1
	M	16	5:20	11:06	17:47	23:22
			10.6	1.4	9.9	2.3
	Tu	17	6:02	11:51	18:35	. . .
			9.5	2.6	8.7	. . .
☽ S	W	18	0:12	6:54	13:00	19:45
			8.5	8.5	8.8	7.7
	Th	19	1:32	8:15	14:54	21:48
			4.5	7.8	4.4	7.2
	F	20	3:44	10:06	16:40	23:28
			4.7	7.9	4.2	7.8
A	S	21	5:06	11:25	17:40	. . .
			4.1	8.6	3.6	. . .
	S	22	0:16	5:40	12:14	18:13
			8.6	3.5	9.4	2.9
	M	23	0:50	6:20	12:50	18:40
			9.4	2.8	10.2	2.2
	Tu	24	1:17	6:45	13:20	19.01
			10.1	2.0	10.9	1.4
	W	25	1:40	7:09	13:48	19:26
			10.7	1.3	11.4	0.7
E ○	Th	26	2:04	7:35	14:14	19:52
			11.1	0.6	11.7	0.1
	F	27	2:28	8:02	14:40	20:21
			11.4	0.0	11.8	—0.3
	S	28	2:52	8:34	15:08	20:52
			11.5	—0.4	11.7	—0.4
	S	29	3:20	9:07	15:38	21:26
			11.5	—0.4	11.4	—0.1
	M	30	3:50	9:48	16:11	22:05
			11.3	0.1	11.0	0.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it. In order to refer the above heights to the plane used upon the Portuguese Charts of Lisbon Harbor, add 1.4 feet to each. A foot is about three-tenths of a meter.

The time used is Portuguese Standard, for the meridian 9° 11′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	4:25	10:28	16:50	22:42
			10.8	0.6	10.3	1.2
	W	2	5:08	11:14	17:38	23:32
			10.1	1.4	9.5	2.4
N	Th	3	6:02	12:20	18:45	. . .
☾			9.3	2.5	8.6	. . .
	F	4	0:45	7:20	13:54	20:30
			8.5	8.7	8.3	8.0
	S	5	2:40	9:10	15:40	22:25
			8.9	8.7	8.0	8.5
	S	6	4:20	10:44	17:00	23:38
			8.1	9.7	2.0	9.7
P	M	7	5:21	11:48	17:52	. . .
			2.0	11.0	0.9	. . .
	Tu	8	0:28	6:08	12:40	18:35
			11.0	0.8	12.2	0.0
E	W	9	1:10	6:50	13:24	19:15
			12.0	—0.1	13.0	—0.6
●	Th	10	1:48	7:30	14:04	19:51
			12.7	—0.7	13.3	—0.8
	F	11	2:24	8:07	14:42	20:27
			12.9	—0.9	13.2	—0.8
	S	12	3:00	8:42	15:20	21:00
			12.7	—0.8	12.6	—0.3
	S	13	3:35	9:18	15:57	21:34
			12.2	—0.3	11.7	0.4
	M	14	4:10	9:54	16:35	22:06
			11.4	0.5	10.6	1.3
	Tu	15	4:46	10:30	17:14	22:40
			10.4	1.4	9.5	2.4
S	W	16	5:25	11:14	17:58	23:20
			9.4	2.6	8.4	3.5
	Th	17	6:15	12:10	19:00	. . .
			8.5	3.7	7.5	. . .
☽	F	18	0:18	7:25	13:55	20:52
			4.5	7.8	4.5	7.0
A	S	19	2:37	9:08	15:51	22:40
			5.0	7.7	4.4	7.4
	S	20	4:22	10:36	16:51	23:32
			4.4	8.3	3.7	8.3
	M	21	5:08	11:30	17:29	. . .
			3.7	9.1	2.9	. . .
	Tu	22	0:06	5:40	12:10	17:56
			9.1	2.8	9.9	2.1
E	W	23	0:34	6:08	12:40	18:24
			10.0	2.0	10.7	1.2
	Th	24	1:00	6.36	13:11	18:52
			10.7	1.1	11.2	0.5
	F	25	1:27	7:05	13:41	19:21
			11.2	0.3	11.6	—0.1
○	S	26	1:56	7:37	14:12	19:58
			11.6	—0.3	11.8	—0.5
	S	27	2:26	8:12	14:44	20:28
			11.8	—0.6	11.7	—0.5
	M	28	3:00	8:49	15:20	21:04
			11.8	—0.6	11.4	—0.2
	Tu	29	3:34	9:28	16:00	21:42
			11.5	—0.3	11.9	0.4
N	W	30	4:15	10:13	16:44	22:26
			10.9	0.4	10.2	1.4
	Th	31	5:04	10:07	17:39	23:20
			10.2	1.4	9.3	2.5

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	6:04	12:16	18:50	. . .
			9.5	2.5	8.5	. . .
☾	S	2	0:40	7:23	13:53	20:30
			8.5	9.0	3.1	8.3
P	S	3	2:32	9:00	15:30	22:06
			8.7	9.1	2.8	8.8
	M	4	4:04	10:24	16:38	23:13
			2.9	9.9	2.0	9.8
E	Tu	5	5:03	11:26	17:32	. . .
			1.9	10.9	1.1	. . .
	W	6	0:03	5:50	12:18	18:14
			10.9	1.0	11.7	0.4
	Th	7	0:46	6:30	13:03	18:52
			11.7	0.3	12.3	0.0
	F	8	1:25	7:09	13:45	19:28
			12.2	—0.1	12.5	—0.1
●	S	9	2:01	7:45	14:24	20:01
			12.4	—0.3	12.3	0.0
	S	10	2:38	8:20	15:01	20:34
			12.2	—0.1	11.7	0.4
	M	11	3:12	8:56	15:37	21:05
			11.8	0.3	11.0	0.9
S	Tu	12	3:48	9:30	16:14	21:36
			11.1	0.9	10.1	1.6
	W	13	4:24	10:06	16:50	22:09
			10.4	1.6	9.2	2.4
	Th	14	5:02	10:47	17:30	22:45
			9.6	2.4	8.4	3.2
	F	15	5:45	11:36	18:20	23:35
			8.8	3.3	7.7	4.0
A	S	16	6:40	12:46	19:29	. . .
☽			8.2	4.0	7.4	. . .
	S	17	0:57	7:52	14:21	20:56
			4.6	7.9	4.2	7.4
	M	18	2:59	9:12	15:32	22:09
			4.5	8.1	3.8	7.9
	Tu	19	4:00	10:20	16:29	23:00
			3.9	8.6	3.0	8.6
E	W	20	4:44	11:10	17:06	23:40
			3.1	9.3	2.3	9.5
	Th	21	5:23	11:52	17:42	. . .
			2.2	10.0	1.4	. . .
	F	22	0:16	6:00	12:33	18:19
			10.3	1.2	10.7	0.7
	S	23	0:52	6:36	13:12	18:54
			11.0	0.4	11.2	0.1
○	S	24	1:30	7:15	13:40	19:30
			11.6	—0.2	11.5	—0.2
	M	25	2:07	7:56	14:30	20:10
			11.9	—0.5	11.5	—0.3
N	Tu	26	2:48	8:38	15:12	20:51
			12.0	—0.5	11.3	0.0
	W	27	3:30	9:22	15:58	21:35
			11.7	—0.2	10.9	0.5
P	Th	28	4:16	10:11	16:48	22:23
			11.3	0.3	10.2	1.2
	F	29	5:08	11:06	17:44	23:20
			10.8	1.1	9.7	2.2
	S	30	6:06	12:14	18:51	. . .
			10.2	2.0	9.2	. . .

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:34	7:15	13:37	20:08
			2.9	9.8	2.6	8.9
	M	2	2:06	8:32	15:00	21:27
			3.2	9.6	2.5	9.0
E	Tu	3	3:32	9:50	16:08	22:38
			2.8	9.8	2.2	9.6
	W	4	4:35	10:59	17:06	23:35
			2.2	10.3	1.7	10.3
	Th	5	5:28	11:57	17:52	. . .
			1.6	10.8	1.3	. . .
	F	6	0:23	6:11	12:47	18:30
			10.9	1.1	11.2	1.0
	S	7	1:06	6:52	13:31	19:08
			11.4	0.8	11.4	0.9
●	S	8	1:45	7:30	14:12	19:42
			11.7	0.7	11.2	1.0
S	M	9	2:22	8:06	14:50	20:15
			11.7	0.8	10.9	1.1
	Tu	10	3:00	8:40	15:26	20:46
			11.4	1.0	10.4	1.4
	W	11	3:33	9:14	16:00	21:16
			11.0	1.2	9.9	1.8
	Th	12	4:08	9:49	16:33	21:49
			10.5	1.6	9.3	2.1
	F	13	4:44	10:26	17:06	22:26
			10.0	2.0	8.8	2.6
A	S	14	5:20	11:08	17:44	23:09
			9.4	2.5	8.5	3.1
	S	15	6:00	11:57	18:28	. . .
			9.0	3.0	8.2	. . .
☽	M	16	0:02	6:47	12:56	19:18
			8.5	3.7	3.3	8.1
E	Tu	17	1:10	7:40	14:02	20:20
			3.8	8.5	3.4	8.1
	W	18	2:28	8:47	15:10	21:30
			3.8	8.5	3.2	8.4
	Th	19	3:36	9:56	16:10	22:34
			3.3	8.8	2.7	9.0
	F	20	4:34	11:00	17:00	23:30
			2.6	9.3	2.0	9.8
	S	21	5:25	11:58	17:47	. . .
			1.7	10.0	1.3	. . .
	S	22	0:22	6:13	12:50	18:32
			10.6	0.8	10.6	0.6
	M	23	1:10	7:00	13:38	19:16
			11.4	0.1	11.2	0.2
N	Tu	24	1:56	7:45	14:25	20:00
○			11.9	—0.3	11.4	0.0
	W	25	2:42	8:32	15:11	20:45
			12.2	—0.5	11.5	0.0
P	Th	26	3:27	9:20	15:57	21:32
			12.3	—0.4	11.4	0.2
	F	27	4:15	10:09	16:45	22:21
			12.2	—0.1	11.0	0.7
	S	28	5:04	11:00	17:36	23:15
			11.8	0.5	10.6	1.3
	S	29	5:56	11:59	18:31	. . .
			11.2	1.2	10.1	. . .
E	M	30	0:14	6:54	13:05	19:31
☾			2.0	10.6	1.9	9.5
	Tu	31	1:27	7:57	14:16	20:40
			2.6	9.9	2.5	9.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it. In order to refer the above heights to the plane used upon the Portuguese Charts of Lisbon Harbor, add 1.4 feet to each. A foot is about three-tenths of a meter.

The time used is Portuguese Standard, for the meridian 9° 11′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	0:20 12.3	6:52 2.5	12:45 13.3	19:18 1.9
	Tu	2	1:12 12.6	7:50 1.2	13:38 14.1	20:12 0.8
	W	3	2:00 14.5	8:42 0.0	14:30 14.7	21:08 −0.1
N ○ P	Th	4	2:50 15.3	9:32 −0.9	15:20 15.0	21:50 −0.7
	F	5	3:40 15.7	10:20 −1.5	16:10 15.0	22:38 −1.0
	S	6	4:28 15.7	11:08 −1.7	17:00 14.7	23:23 −1.0
	S	7	5:22 15.4	11:53 −1.5	18:00 14.2	. . . . .
	M	8	0:10 −0.8	6:25 14.9	12:35 −0.9	19:10 13.5
	Tu	9	0:53 −0.2	7:35 14.2	13:24 −0.1	20:12 12.9
E	W	10	1:40 0.7	8:40 13.6	14:10 1.0	21:10 12.4
☾	Th	11	2:25 1.7	9:38 12.9	15:00 2.2	22:08 11.9
	F	12	3:15 2.8	10:35 12.3	15:55 3.4	23:00 11.6
	S	13	4:20 3.8	11:30 11.8	17:06 4.0	23:57 11.6
	S	14	5:35 4.1	12:30 11.7	18:22 4.0	. . . . .
	M	15	0:50 11.9	6:50 3.8	13:25 11.8	19:23 3.5
	Tu	16	1:43 12.4	7:48 3.0	14:17 12.1	20:13 2.7
S	W	17	2:30 12.9	8:35 2.3	15:00 12.6	20:55 2.1
A	Th	18	3:10 13.5	9:18 1.6	15:35 12.9	21:35 1.6
●	F	19	3:40 13.8	10:00 1.1	16:08 13.1	22:14 1.2
	S	20	4:08 14.0	10:35 0.8	16:25 13.2	22:52 0.9
	S	21	4:34 14.1	11:12 0.6	16:48 13.1	23:30 0.9
	M	22	4:55 14.0	11:50 0.6	17:00 13.1	. . . . .
	Tu	23	0:10 1.0	5:18 13.9	12:27 0.7	17:27 13.0
E	W	24	0:48 1.2	5:45 13.8	13:02 1.0	17:57 12.9
	Th	25	1:20 1.6	6:20 13.5	13:40 1.5	18:35 12.6
	F	26	2:00 2.1	7:05 12.9	14:20 2.1	19:23 12.1
☽	S	27	2:40 2.8	8:00 12.3	15:08 2.8	20:35 11.6
	S	28	3:36 3.4	9:43 11.8	16:10 3.5	22:28 11.5
	M	29	4:55 3.8	11:15 11.9	17:35 3.6	23:50 12.0
	Tu	30	6:22 3.2	12:28 12.5	18:58 2.9	. . . . .
N	W	31	1:00 13.0	7:34 1.9	13:33 13.3	19:58 1.6

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:00 14.2	8:30 0.4	14:32 14.3	20:54 0.7
P	F	2	2:54 15.3	9:20 −0.9	15:24 15.0	21:38 −0.7
○	S	3	3:48 16.0	10:07 −1.8	16:12 15.4	22:23 −1.4
	S	4	4:30 16.3	10:50 −2.1	16:57 15.4	23:05 −1.7
	M	5	5:20 16.2	11:34 −2.0	17:45 15.0	23:48 −1.5
E	Tu	6	6:04 15.7	12:18 −1.4	18:32 14.3	. . . . .
	W	7	0:30 −1.0	6:55 14.8	13:00 −0.5	19:23 13.4
	Th	8	1:10 0.0	7:48 13.6	13:40 0.7	20:14 12.5
	F	9	1:52 1.2	8:45 12.4	14:20 2.1	21:12 11.6
☾	S	10	2:35 2.6	9:48 11.4	15:06 3.6	22:15 11.0
	S	11	3:30 4.0	10:55 10.7	16:06 4.8	23:22 10.7
	M	12	4:43 5.0	12:05 10.5	17:30 5.3	. . . . .
S	Tu	13	0:28 11.0	6:17 5.0	13:14 10.8	18:57 4.8
A	W	14	1:30 11.6	7:30 4.1	14:18 11.5	19:55 3.7
	Th	15	2:28 12.5	8:20 3.0	14:55 12.3	20:40 2.6
	F	16	3:00 13.3	9:00 1.9	15:28 13.0	21:20 1.6
	S	17	3:32 14.0	9:37 1.0	15:50 13.5	21:55 0.9
●	S	18	3:57 14.5	10:15 0.3	16:10 13.9	22:30 0.3
	M	19	4:18 14.8	10:50 −0.1	16:27 14.1	23:05 0.1
	Tu	20	4:37 14.9	11:25 −0.2	16:44 14.2	23:42 0.0
E	W	21	4:57 14.9	12:00 −0.2	17:05 14.2	. . . . .
	Th	22	0:18 0.2	5:23 14.7	12:35 0.2	17:30 14.1
	F	23	0:52 0.6	5:54 14.3	13:12 0.7	18:07 13.7
	S	24	1:30 1.2	6:33 13.6	13:50 1.5	18:47 13.0
☽	S	25	2:13 2.1	7:20 12.6	14:35 2.6	19:40 12.0
	M	26	3:05 3.1	8:48 11.4	15:35 3.7	21:40 11.2
N	Tu	27	4:25 3.8	11:00 11.2	17:03 4.2	23:40 11.6
	W	28	6:00 3.5	12:26 11.9	18:35 3.4	. . . . .
	Th	29	0:57 12.8	7:20 2.0	13:35 13.1	19:48 1.9

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	2:00 14.2	8:10 0.8	14:30 14.3	20:35 0.3
	S	2	2:50 15.5	9:05 −1.0	15:18 15.3	21:23 −0.9
○	S	3	3:35 16.4	9:50 −1.9	15:58 15.8	22:04 −1.8
E	M	4	4:17 16.7	10:30 −2.3	16:38 15.8	22:45 −2.1
	Tu	5	4:55 16.5	11:10 −2.1	17:15 16.5	23:26 −1.8
	W	6	5:33 16.2	11:50 −1.4	17:48 14.8	. . . . .
	Th	7	0:04 −1.2	6:10 14.7	12:30 −0.5	18:20 13.8
	F	8	0:43 −0.2	6:40 13.4	13:06 0.8	18:48 12.7
	S	9	1:28 1.1	6:54 12.0	13:45 2.1	19:00 11.6
☾	S	10	2:08 2.6	7:00 10.7	14:27 3.7	19:25 10.5
S	M	11	2:50 4.0	10:30 9.9	15:20 5.1	22:48 10.2
	Tu	12	3:00 5.2	11:46 9.8	16:40 5.3	. . . . .
A	W	13	0:08 10.5	5:37 5.5	12:55 10.4	18:27 5.5
	Th	14	1:07 11.2	7:02 4.6	13:52 11.3	19:32 4.2
	F	15	1:57 12.3	7:55 3.3	14:30 12.3	20:17 2.9
	S	16	2:35 13.3	8:35 2.0	15:00 13.2	20:53 1.6
	S	17	3:05 14.2	9:12 0.8	15:23 13.9	21:30 0.7
●	M	18	3:26 14.8	9:45 0.0	15:40 14.5	22:05 0.0
E	Tu	19	3:48 15.3	10:22 −0.5	16:00 14.8	22:40 −0.4
	W	20	4:10 15.5	10:55 −0.7	16:18 15.0	23:14 −0.5
	Th	21	4:32 15.5	11:32 −0.6	16:40 15.0	23:52 −0.3
	F	22	5:00 15.2	12:10 −0.2	17:10 14.8	. . . . .
	S	23	0:30 0.1	5:30 14.6	12:48 0.5	17:42 14.2
	S	24	1:10 0.8	6:10 13.6	13:28 1.5	18:22 13.3
	M	25	1:55 1.7	7:00 12.3	14:16 2.6	19:15 12.1
N ☽	Tu	26	2:50 2.8	9:00 11.0	15:17 3.7	22:00 11.2
	W	27	4:08 3.6	11:08 11.1	16:43 4.3	23:40 11.8
P	Th	28	5:45 3.3	12:23 12.0	18:18 3.5	. . . . .
	F	29	0:50 13.0	7:00 2.0	13:25 13.2	19:25 1.9
	S	30	1:48 14.4	8:00 0.4	14:16 14.4	20:17 0.3
	S	31	2:35 15.6	8:45 −0.9	15:00 15.4	21:00 −0.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 8.1 feet (2.5 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.), and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E	M	1	3:17	9:27	15:36	21:42
○			16.3	−1.6	15.8	−1.6
	Tu	2	3:53	10:07	16:10	22:20
			16.5	−1.8	15.9	−1.8
	W	3	4:27	10:44	16:40	23:00
			16.1	−1.6	15.5	−1.5
	Th	4	4:57	11:20	17:08	23:40
			15.8	−0.9	14.8	−0.8
	F	5	5:22	12:00	17:28	. . .
			14.2	0.1	13.9	. . .
	S	6	0:18	5:38	12:38	17:44
			0.2	13.0	1.2	12.9
	S	7	1:00	5:50	13:18	18:04
			1.4	11.9	2.5	11.9
S	M	8	1:39	6:11	14:00	18:33
			2.6	10.8	3.8	10.9
☾	Tu	9	2:24	6:42	14:46	22:18
			3.9	9.7	5.1	10.2
A	W	10	3:23	11:18	16:00	23:30
			5.0	9.8	5.8	10.5
	Th	11	4:48	12:20	17:38	. . .
			5.4	10.3	5.7	. . .
	F	12	0:29	6:18	13:08	18:53
			11.2	4.7	11.2	4.5
	S	13	1:19	7:17	13:47	19:40
			12.1	3.4	12.2	3.1
	S	14	1:51	8:00	14:15	20:20
			13.1	2.1	13.2	1.8
E	M	15	2:20	8:38	14:41	21:00
			14.1	0.9	14.1	0.8
	Tu	16	2:47	9:14	15:02	21:34
			14.8	0.0	14.8	0.0
●	W	17	3:13	9:50	15:24	22:12
			15.4	−0.5	15.2	−0.5
	Th	18	3:39	10:28	15:49	22:49
			15.6	−0.8	15.5	−0.6
	F	19	4:07	11:07	16:18	23:30
			15.5	−0.5	15.4	−0.5
	S	20	4:39	11:48	16:49	. . .
			15.1	−0.1	15.0	. . .
	S	21	0:13	5:15	12:30	17:27
			−0.1	14.3	0.6	14.3
N	M	22	1:00	6:00	13:15	18:12
P			0.6	13.1	1.5	13.2
	Tu	23	1:46	7:03	14:05	19:20
			1.4	11.8	2.5	12.0
☽	W	24	2:44	9:45	15:05	22:15
			2.4	11.2	3.4	11.9
	Th	25	3:54	11:05	16:24	23:30
			3.0	11.6	3.8	12.5
	F	26	5:21	12:07	17:50	. . .
			2.9	12.4	3.3	. . .
	S	27	0:31	6:37	13:02	19:00
			13.4	1.9	13.3	2.0
E	S	28	1:22	7:38	13:49	19:51
			14.4	0.7	14.3	0.7
	M	29	2:09	8:20	14:32	20:35
			15.1	−0.2	15.0	−0.3
	Tu	30	2:51	9:00	15:08	21:17
			15.6	−0.8	15.4	−0.9

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	3:28	9:39	15:40	22:56
			15.6	−0.9	15.4	−0.9
	Th	2	4:58	10:18	16:09	22:36
			15.1	−0.6	15.1	−0.6
	F	3	4:25	10:56	16:34	23:15
			14.4	0.0	14.5	0.0
	S	4	4:47	11:35	16:56	23:55
			13.5	0.8	13.7	0.8
S	S	5	5:02	12:25	17:15	. . .
			12.5	1.7	12.9	. . .
	M	6	0:37	5:21	12:56	17:39
			1.7	11.6	2.7	12.1
A	Tu	7	1:19	5:49	13:39	18:12
			2.6	10.8	3.6	11.2
	W	8	2:04	6:26	14:25	21:42
			3.5	10.0	4.5	10.6
☾	Th	9	2:55	10:33	15:25	22:45
			4.2	10.1	5.1	10.8
	F	10	4:00	11:30	16:38	23:35
			4.7	10.5	5.3	11.3
	S	11	5:18	12:12	17:55	. . .
			4.4	11.2	4.6	. . .
	S	12	0:20	6:24	12:52	18:58
			12.0	3.6	12.0	3.5
E	M	13	0:58	7:16	13:24	19:43
			12.9	2.4	13.0	2.3
	Tu	14	1:31	8:00	13:54	20:24
			13.8	1.3	13.9	1.2
	W	15	2:05	8:40	14:25	21:03
			14.5	0.5	14.7	0.3
●	Th	16	2:39	9:21	14:53	21:46
			15.1	−0.1	15.3	−0.2
	F	17	3:14	10:02	15:28	22:29
			15.3	−0.3	15.5	−0.5
	S	18	3:50	10:45	16:02	23:12
			15.2	−0.3	15.4	−0.6
N	S	19	4:29	11:30	16:41	. . .
P			14.6	0.0	15.0	. . .
	M	20	0:00	5:14	12:16	17:26
			−0.3	13.8	0.5	14.2
	Tu	21	0:48	6:16	13:04	18:29
			0.1	12.8	1.1	13.2
	W	22	1:38	8:16	13:55	20:44
			0.8	12.0	1.9	12.7
☽	Th	23	2:32	9:43	14:50	22:03
			1.6	12.0	2.6	12.8
	F	24	3:35	10:44	15:57	23:05
			2.2	12.2	3.1	13.1
E	S	25	4:49	11:41	17:13	. . .
			2.5	12.6	3.0	. . .
	S	26	0:02	6:00	12:30	18:25
			13.5	2.2	13.2	2.4
	M	27	0:54	7:01	13:19	19:20
			13.9	1.5	13.8	1.5
	Tu	28	1:43	7:51	14:04	20:10
			14.2	0.9	14.3	0.8
	W	29	2:25	8:34	14:41	20:53
			14.4	0.5	14.6	0.3
○	Th	30	3:05	9:15	15:20	21:34
			14.3	0.4	14.6	0.2
	F	31	3:36	9:54	15:48	22:15
			13.9	0.5	14.4	0.4

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	4:05	10:34	16:14	22:57
			13.4	0.9	14.0	0.7
	S	2	4:29	11:15	16:39	23:39
			12.8	1.3	13.5	1.1
	M	3	4:49	11:58	17:03	. . .
			12.2	1.8	12.9	. . .
A	Tu	4	0:18	5:12	12:38	17:32
			1.6	11.6	2.4	12.4
	W	5	1:00	5:43	13:20	18:09
			2.2	11.1	3.0	11.8
	Th	6	1:42	6:25	14:00	19:06
			2.7	10.6	3.5	11.2
	F	7	2:25	9:40	14:49	21:43
			3.2	10.5	4.1	11.3
☾	S	8	3:19	10:29	15:43	22:34
			3.6	10.7	4.4	11.5
E	S	9	4:16	11:12	16:50	23:22
			3.8	11.1	4.4	11.9
	M	10	5:22	11:52	18:00	. . .
			3.6	11.8	3.8	. . .
	Tu	11	0:04	6:26	12:31	19:00
			12.5	2.9	12.6	2.9
	W	12	0:43	7:20	13:12	19:51
			13.3	2.0	13.5	1.8
	Th	13	1:32	8:10	13:53	20:39
			14.0	1.1	14.3	0.8
	F	14	2:15	8:58	14:34	21:25
			14.5	0.5	15.0	0.0
●	S	15	3:00	9:42	15:15	22:10
N			14.8	0.0	15.4	−0.6
P	S	16	3:43	10:30	16:00	23:00
			14.8	−0.2	15.4	−0.8
	M	17	4:32	11:17	16:48	23:48
			14.5	−0.2	15.1	−0.9
	Tu	18	5:30	12:03	17:47	. . .
			13.9	−0.1	14.6	. . .
	W	19	0:36	6:49	12:51	19:13
			−0.6	13.2	0.3	14.0
	Th	20	1:20	8:10	13:39	20:34
			−0.1	12.9	0.9	13.6
☽	F	21	2:13	9:16	14:29	21:38
			0.7	12.6	1.6	13.4
E	S	22	3:06	10:12	15:25	22:35
			1.6	12.5	2.4	13.2
	S	23	4:08	11:07	16:30	23:31
			2.4	12.5	3.0	13.0
	M	24	5:18	12:00	17:45	. . .
			2.8	12.6	3.1	. . .
	Tu	25	0:25	6:25	12:49	18:50
			12.9	2.7	12.9	2.7
	W	26	1:17	7:22	13:39	19:46
			12.9	2.3	13.2	2.1
	Th	27	2:06	8:10	14:24	20:34
			13.0	1.9	13.6	1.6
	F	28	2:52	8:54	15:04	21:16
			13.1	1.6	13.9	1.2
S	S	29	3:29	9:35	15:39	22:00
○			13.0	1.4	14.0	1.0
	S	30	4:02	10:15	16:10	22:39
			12.9	1.3	13.9	1.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 8.1 feet (2.5 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	4:27	10:55	16:37	23:15			Th	1	5:00	11:52	17:10	. . .			S	1	0:18	5:12	12:34	17:30	
			12.7	1.3	13.7	0.9					13.1	0.9	14.0	. . .					0.3	14.0	0.9	14.3	
A	Tu	2	4:57	11:38	17:05	. .		E	F	2	0:13	5:17	12:30	17:33			M	2	0:50	5:40	13:10	18:02	
			12.4	1.5	13.4	. .					0.6	13.0	1.1	13.8					0.9	13.7	1.5	13.7	
	W	3	0:00	5:15	12:15	17:30			S	3	0:47	5:42	13:00	18:00			Tu	3	1:30	6:18	13:50	18:43	
			1.2	12.1	1.7	13.0					0.9	12.9	1.5	13.5					1.7	13.1	2.3	12.7	
	Th	4	0:38	5:40	12:55	18:00			S	4	1:23	6:15	13:40	18:38		☾	W	4	2:10	7:04	14:40	19:42	
			1.4	11.9	2.1	12.7					1.4	12.6	2.1	13.1					2.6	12.2	3.2	11.5	
	F	5	1:17	6:10	13:34	18:38			M	5	2:00	6:55	14:20	19:25			Th	5	3:04	8:18	15:50	22:20	
			1.7	11.6	2.5	12.4					2.0	12.3	2.8	12.4					3.7	11.2	4.0	10.8	
E	S	6	1:55	6:55	14:13	19:26		☾	Tu	6	2:42	7:50	15:08	20:38		N	F	6	4:23	11:08	17:25	23:55	
			2.2	11.4	3.0	12.0					2.7	11.7	3.5	11.6					4.3	11.3	4.0	11.4	
☾	S	7	2:37	7:57	15:00	20:48			W	7	3:38	9:28	16:18	22:35			S	7	6:00	12:27	18.50	. . .	
			2.7	11.1	3.5	11.8					3.5	11.3	4.1	11.4					3.9	12.4	2.7	. . .	
	M	8	3:24	9:38	15:53	22:10			Th	8	4:53	11:16	17:45	23:55			S	8	1:03	7:13	13:28	19:52	
			3.2	11.2	3.9	11.8					4.0	11.6	3.9	11.8					12.7	2.4	13.9	0.9	
	Tu	9	4:24	10:50	17:08	23:15		N	F	9	6:18	12:28	19:05	. . .		P	M	9	2:00	8:08	14:20	20:40	
			3.5	11.5	4.0	12.0					3.6	12.4	2.7	. . .					14.0	0.7	15.3	—0.8	
	W	10	5:36	11:46	18:18	. . .			S	10	1:08	7:30	13:30	20:06			Tu	10	2:47	8:56	15:05	21:25	
			3.5	12.1	3.5	. . .					12.7	2.4	13.7	1.1					15.2	—0.8	16.5	—1.9	
	Th	11	0:13	6:45	12:43	19:24			S	11	2:03	8:25	14:25	20:57		●	W	11	3:30	9:40	15:42	22:05	
			12.5	2.8	12.9	2.4					13.8	0.9	14.9	—0.3					15.9	—1.8	17.0	—2.3	
	F	12	1:10	7:45	13.35	20:20		P	M	12	2:55	9:13	15:15	21:43		E	Th	12	4:07	10:20	16:25	22:48	
			13.2	1.9	13.9	1.1		●			14.7	—0.3	15.9	—1.5					16.2	—2.3	17.0	—2.3	
N	S	13	2:08	8:38	14:25	21:10			Tu	13	3:42	10:00	16:00	22:30			F	13	4:45	11:00	17:00	23:28	
			13.9	0.9	14.8	* 0.0					15.4	—1.3	16.5	—2.1					15.9	—2.2	16.3	—1.9	
●	S	14	2:55	9:28	15:15	22:00			W	14	4:30	10:40	16:45	23:12			S	14	5:20	11:43	17:38	. . .	
			14.5	0.0	15.4	—0.9					15.6	—1.8	16.6	—2.2					15.2	—1.6	15.2	. . .	
P	M	15	3:45	10:15	16:05	22:46		E	Th	15	5:15	11:28	17:30	23:50			S	15	0:05	5:55	12:22	18:12	
			14.8	—0.6	15.8	—1.5					15.1	—1.8	16.2	—1.9					—0.9	14.2	—0.6	13.8	
	Tu	16	4:38	11:00	16 55	23:32			F	16	6:00	12:08	18:20	. . .			M	16	0:48	6:28	13:00	18:40	
			14.8	—1.0	15.8	—1.6					14.8	—1.4	15.3	. . .					0.4	13.0	0.8	12.3	
	W	17	5:38	11:47	17:52	. . .			S	17	0:37	6:50	12:50	19:15			Tu	17	1:28	6:58	13:47	18:50	
			14.5	—1.0	15.5	. . .					—1.1	14.0	—0.6	14.2					1.9	11.8	2.3	10.8	
	Th	18	0:18	6:35	12:33	18:55			S	18	1:18	7:45	13:33	20:15		☽ S	W	18	2:12	9:20	14:35	22:18	
			—1.4	14.1	—0.7	14.9					0.1	13.0	0.6	12.9					3.5	10.8	3.8	10.1	
E	F	19	1:00	7:38	13:15	20:00		☽	M	19	2:00	8:48	14:18	21:25			Th	19	3:04	10:44	15:38	23:34	
			—0.8	13.5	—0.1	14.2					1.5	12.0	2.0	11.7					4.8	10.5	5.0	10.0	
	S	20	1:48	8:38	14:00	21:03			Tu	20	2:45	9:55	15:10	22:35			F	20	4:22	11:53	17:10	. . .	
			0.1	13.0	0.9	13.4					3.0	11.3	3.5	10.9					5.7	10.8	4.8	. . .	
☽	S	21	2:35	9:35	14:50	22:00			W	21	3:45	11:00	16:17	23:45		A	S	21	0:42	6:05	12:58	18:48	
			1.3	12.4	2.0	12.6					4.4	11.0	4.7	10.6					10.6	5.4	11.5	4.6	
	M	22	3:26	10:30	15:48	23:00		S	Th	22	5:04	12:10	17:50	. . .			S	22	1:35	7:15	13:43	19:40	
			2.6	12.0	3.2	12.0					5.1	11.1	5.0	. . .					11.4	4.2	12.5	3.3	
	Tu	23	4:30	11:30	17:00	. . .			F	23	0:55	6:34	13:12	19:12			M	23	2:15	8:00	14:20	20:20	
			3.6	11.8	3.9	. . .					10.8	4.8	11.7	4.2					12.4	2.8	13.5	2.0	
	W	24	0:00	5:45	12:25	18:20			S	24	1:55	7:38	14:07	20:03			Tu	24	2:44	8:37	14:48	20:55	
			11.6	4.0	11.9	4.0					11.5	3.8	12.6	3.0					13.3	1.6	14.3	0.9	
	Th	25	1.00	6.57	13:23	19:30		A	S	25	2:42	8:23	14:48	20:45			W	25	3:07	9:10	15:12	21:28	
			11.7	3.8	12.3	3.4					12.3	2.7	13.5	1.9					14.0	0.7	14.9	0.1	
S	F	26	2.00	7:54	14:15	20:20			M	26	3:15	9:00	15:20	21:22		E ○	Th	26	3:25	9:45	15:33	22:02	
			12.0	3.1	12.9	2.5					13.1	1.7	14.2	1.0					14.5	0.1	15.3	—0.4	
	S	27	2:48	8:38	15:00	21:00		○	Tu	27	3:40	9:38	15:45	21:57			F	27	3:43	10:20	15:50	22:35	
			12.4	2.3	13.5	1.8					13.6	0.9	14.6	0.3					14.8	—0.2	15.4	—0.5	
	S	28	3:30	9:20	15:35	21:42			W	28	4:00	10:14	16.05	22:32			S	28	4:00	10:54	16.10	23:10	
			12.8	1.7	13.9	1.2					13.9	0.4	14.9	—0.1					15.0	—0.2	15.4	—0.3	
○ A	M	29	4:00	10:00	16:05	22:20			Th	29	4:16	10:48	16:23	23:05			S	29	4:18	11:30	16:33	23:50	
			13.1	1.2	14.2	0.8					14.1	0.2	14.9	—0.2					15.0	0.0	15.1	0.1	
	Tu	30	4:25	10:38	16:30	22:58		E	F	30	4:28	11:23	16:40	23:40			M	30	4:43	12:10	17:03	. . .	
			13.2	0.9	14.2	0.5					14.2	0.2	14.9	—0.1					14.8	0.5	14.6	. . .	
	W	31	4:45	11:15	16:52	23:35			S	31	4:48	11:57	17:00	. . .									
			13.2	0.8	14.2	0.5					14.1	0.4	14.7	. . .									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 8.1 feet (2.5 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0ʰ is midnight, 12ʰ is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator. A, P. moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	0:25	5:14	12:48	17:40
			0.8	14.8	1.2	13.7
	W	2	1:05	5:50	13:30	18:20
			1.7	13.5	2.0	12.5
N ☾	Th	3	1:50	6:37	14:24	19:20
			2.7	12.3	3.0	11.1
	F	4	2:47	7:55	15:33	22:37
			3.7	11.1	3.7	10.7
	S	5	4:05	11:12	17:07	23:53
			4.3	11.5	3.7	11.6
	S	6	5:38	12:20	18:30	. . .
			3.8	12.8	2.4	. . .
P	M	7	0:55	6:58	13:15	19:32
			12.9	2.3	14.3	0.7
	Tu	8	1:42	7:48	14:00	20:20
			14.3	0.6	15.6	—0.8
E	W	9	2:28	8:34	14:46	21:00
			15.4	—0.9	16.5	—1.8
●	Th	10	3:08	9:17	15:24	21:42
			16.1	—1.8	16.9	—2.2
	F	11	3:42	9:57	16:00	22:22
			16.3	—2.1	16.6	—2.0
	S	12	4:15	10:38	16:30	23:00
			16.0	—1.9	15.8	—1.3
	S	13	4:45	11:18	17:00	23:40
			15.2	—1.2	14.7	—0.3
	M	14	5:10	12:00	17:20	. . .
			14.3	—0.1	13.3	. . .
	Tu	15	0:20	5:30	12:40	17:36
			0.9	13.1	1.2	12.0
S	W	16	1:00	5:50	13:24	17:54
			2.3	12.0	2.5	10.7
	Th	17	1:45	6:17	14:10	22:00
			3.6	10.8	3.8	9.8
☽	F	18	2:20	10:18	15:10	23:10
			4.7	10.4	4.9	9.9
A	S	19	3:42	11:25	16:30	. . .
			5.6	10.7	5.4	. . .
	S	20	0:10	5:10	12:18	18:00
			10.5	5.0	11.4	4.8
	M	21	0:56	6:33	13:03	19:00
			11.8	4.6	12.3	3.5
	Tu	22	1:34	7:23	13:38	19:45
			12.3	3.2	13.3	2.2
E	W	23	2:04	8:04	14:08	20:20
			13.2	2.0	14.1	1.1
	Th	24	2:28	8:40	14:32	20:57
			14.0	0.9	14.8	0.3
	F	25	2:48	9:17	14:55	21:30
			14.6	0.2	15.3	—0.2
○	S	26	3:07	9:50	15:20	22:08
			15.1	—0.2	15.5	—0.4
	S	27	3:30	10:30	15:48	22:45
			15.3	—0.3	15.4	—0.2
	M	28	3:53	11:08	16:13	23:24
			15.3	—0.1	15.1	0.2
	Tu	29	4:23	11:48	16:45	. . .
			15.0	0.3	14.4	. . .
N	W	30	0:08	4:57	12:32	17:24
			0.8	14.4	0.9	13.4
	Th	31	0:50	5:38	13:20	18:10
			1.6	13.5	1.6	12.1
NOVEMBER.						
	F	1	1:38	6:30	14:15	20:42
			2.4	12.3	2.4	10.9
☾	S	2	2:35	9:34	15:20	22:32
			3.2	11.6	3.0	11.2
P	S	3	3:46	11:00	16:42	23:38
			3.7	12.2	3.1	12.0
	M	4	5:10	12:00	18:08	. . .
			3.4	13.2	2.2	. . .
E	Tu	5	0:32	6:25	12:55	19:06
			13.1	2.3	14.3	0.9
	W	6	1:20	7:23	13:42	19:55
			14.2	0.8	15.2	—0.2
	Th	7	2:04	8:12	14:24	20:38
			15.0	—0.3	15.8	—1.0
	F	8	2:43	8:58	15:02	21:18
			15.6	—1.1	16.0	—1.2
●	S	9	3:18	9:35	15:38	21:57
			15.8	—1.3	15.6	—1.0
	S	10	3:50	10:15	16:08	22:37
			15.5	—1.0	14.9	—0.4
	M	11	4:20	10:55	16:33	23:18
			14.9	—0.4	13.9	0.4
S	Tu	12	4:44	11:37	16:53	23:57
			14.1	0.4	12.8	1.3
	W	13	5:07	12:20	17:10	. . .
			13.1	1.4	11.8	. . .
	Th	14	0:40	5:30	13:03	17:34
			2.3	12.2	2.4	10.9
	F	15	1:22	6:00	13:48	18:08
			3.3	11.3	3.3	10.0
A ☽	S	16	2:10	9:37	14:40	22:26
			4.2	10.8	4.0	10.1
	S	17	3:10	10:37	15:37	23:20
			4.8	10.9	4.7	10.5
	M	18	4:14	11:27	16:54	. . .
			5.2	11.3	4.7	. . .
	Tu	19	0:08	5:32	12:12	18:05
			11.1	4.8	12.0	3.9
E	W	20	0:42	6:35	12:50	19:00
			11.8	3.8	12.7	2.9
	Th	21	1:15	7:25	13:28	19:45
			12.7	2.7	13.5	1.8
	F	22	1:43	8:06	13:58	20:24
			13.6	1.6	14.2	0.9
	S	23	2:10	8:46	14:24	21:03
			14.3	0.8	14.8	0.3
○	S	24	2:38	9:28	14:55	21:43
			14.9	0.2	15.1	0.0
	M	25	3:08	10:08	15:30	22:25
			15.3	—0.2	15.1	0.0
N	Tu	26	3:40	10:50	16:08	23:08
			15.3	—0.2	14.8	0.1
	W	27	4:15	11:35	16:48	23:58
			15.1	—0.1	14.1	0.5
P	Th	28	4:57	12:23	17:30	. . .
			14.5	0.2	13.2	. . .
	F	29	0:40	5:44	13:12	18:40
			1.0	13.7	0.7	12.2
	S	30	1:28	7:05	14:08	20:52
			1.6	12.8	1.4	11.7
DECEMBER.						
☾	S	1	2:18	9:28	15:00	22:08
			2.2	12.6	2.0	11.9
	M	2	3:20	10:34	16:08	23:08
			2.8	12.9	2.5	12.3
E	Tu	3	4:32	11:32	17:25	. . .
			3.0	13.3	2.4	. . .
	W	4	0:05	5:50	12:28	18:32
			12.9	2.6	13.8	1.8
	Th	5	0:58	6:52	13:18	19:28
			13.6	1.7	14.2	1.0
	F	6	1:40	7:45	14:05	20:15
			14.2	0.8	14.5	0.5
	S	7	2:23	8:34	14:47	20:57
			14.6	0.2	14.6	0.2
●	S	8	3:00	9:18	15:24	21:38
			14.8	—0.1	14.3	0.2
S	M	9	3:37	9.57	16:00	22:20
			14.8	0.0	13.9	0.4
	Tu	10	4:08	10:40	16:28	23:00
			14.4	0.3	13.3	0.8
	W	11	4:37	11:20	16:53	23:40
			13.9	0.7	12.6	1.3
	Th	12	5:05	12:00	17:10	. . .
			13.3	1.2	11.9	. . .
	F	13	0:22	5:30	12:43	17:35
			1.9	12.6	1.8	11.3
A	S	14	1:00	6:00	13:25	18:08
			2.5	12.0	2.4	10.8
	S	15	1:45	6.52	14:08	21:18
			3.2	11.4	3.1	10.5
☽	M	16	2:28	9:25	14:55	22:08
			3.8	11.2	3.6	10.5
E	Tu	17	3:20	10:20	15:50	22:55
			4.3	11.2	4.0	10.7
	W	18	4:20	11:08	16:55	23:40
			4.6	11.5	4.1	11.2
	Th	19	5:34	11:50	18:04	. . .
			4.4	12.0	3.7	. . .
	F	20	0:20	6:40	12:36	19:08
			11.9	3.6	12.6	2.8
	S	21	1:00	7:33	13:18	19:53
			12.8	2.5	13.3	1.9
	S	22	1:39	8:20	14:00	20:40
			13.7	1.5	14.0	1.1
	M	23	2:20	9:08	14:42	21:24
			14.4	0.5	14.5	0.4
N ○	Tu	24	3:00	9:52	15:25	22:10
			15.0	—0.2	14.7	0.0
	W	25	3:40	10:38	16:06	22:55
			15.3	—0.7	14.7	—0.3
P	Th	26	4:22	11:28	16:55	23:40
			15.3	—0.9	14.3	—0.5
	F	27	5:16	12:12	17:50	. . .
			15.0	—0.8	13.8	. . .
	S	28	0:28	6:10	12:57	19:08
			—0.1	14.5	—0.4	13.1
	S	29	1:12	7:34	13:44	20:26
			0.3	13.9	0.3	12.7
E ☾	M	30	2:00	8:52	14:35	21:32
			1.0	13.4	1.1	12.4
	Tu	31	2:52	10:00	15:30	22:32
			1.8	13.1	2.1	12.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 8.1 feet (2.5 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	JANUARY.						
	M	1	0:45 15.6	7:05 4.1	13:12 16.1	19:39 3.5	
	Tu	2	1:42 16.7	8:10 2.8	14:09 17.1	20:39 2.3	
	W	3	2:35 17.8	9:06 1.4	15:02 18.1	21:32 1.2	
N ○ P	Th	4	3:26 18.8	9:58 0.2	15:54 18.7	22:22 0.4	
	F	5	4:15 19.6	10:48 —0.6	16:43 19.0	23:08 0.0	
	S	6	5:02 19.9	11:35 —0.9	17:32 19.0	23:55 0.0	
	S	7	5:50 19.8	12:20 —0.7	18:18 18.6	. . . . . .	
	M	8	0:40 0.4	6:40 19.3	13:07 —0.1	19:08 17.9	
	Tu	9	1:25 1.1	7:31 18.5	13:54 0.9	20:00 16.9	
E	W	10	2:14 2.1	8:25 17.4	14:44 2.1	20:57 16.0	
☾	Th	11	3:05 3.3	9:22 16.2	15:38 3.4	21:58 15.1	
	F	12	4:08 4.3	10:27 15.3	16:39 4.4	23:01 14.6	
	S	13	5:10 5.1	11:32 14.7	17:47 5.2	. . . . . .	
	S	14	0:02 14.4	6:24 5.3	12:33 14.4	18:58 5.3	
	M	15	1:02 14.6	7:34 5.0	13:31 14.4	20:00 4.8	
	Tu	16	1:55 15.1	8:32 4.3	14:21 14.8	20:50 4.0	
S	W	17	2:40 15.7	9:18 3.5	15:05 15.3	21:33 3.3	
A	Th	18	3:25 16.4	9:57 2.8	15:45 15.8	22:12 2.7	
●	F	19	4:02 16.9	10:33 2.2	16:20 16.3	22:48 2.3	
	S	20	4:37 17.3	11:08 1.9	16:55 16.6	23:21 2.1	
	S	21	5:10 17.6	11:40 1.7	17:27 16.8	23:52 2.2	
	M	22	5:42 17.6	12:12 1.7	17:58 16.9	. . . . . .	
	Tu	23	0:23 2.4	6:15 17.4	12:44 2.0	18:32 16.7	
E	W	24	0:53 2.8	6:50 17.1	13:16 2.4	19:08 16.3	
	Th	25	1:25 3.3	7:27 16.5	13:50 3.0	19:50 15.7	
	F	26	2:01 3.8	8:10 15.8	14:30 3.6	20:38 15.0	
☽	S	27	2:45 4.4	9:06 15.0	15:22 4.4	21:38 14.3	
	S	28	3:45 5.1	10:13 14.3	16:27 5.3	22:57 14.0	
	M	29	5:04 5.6	11:34 14.2	17:58 5.6	. . . . . .	
	Tu	30	0:16 14.5	6:37 5.2	12:52 14.8	19:20 4.8	
N	W	31	1:24 15.6	7:56 3.8	13:57 15.9	20:30 3.3	
	FEBRUARY.						
	Th	1	2:24 17.0	8:58 2.0	14:55 17.2	21:25 1.7	
P	F	2	3:17 18.5	9:50 0.3	15:48 18.4	22:13 0.3	
○	S	3	4:07 19.7	10:37 —0.9	16:34 19.2	22:57 —0.7	
	S	4	4:53 20.5	11:21 —1.6	17:19 19.6	23:38 —1.0	
	M	5	5:35 20.7	12:03 —1.6	18:00 19.5	. . . . . .	
E	Tu	6	0:20 —0.9	6:20 20.4	12:45 —0.9	18:42 18.9	
	W	7	1:00 —0.1	7:08 19.4	13:25 0.2	19:25 17.9	
	Th	8	1:42 1.1	7:48 18.0	14:07 1.6	20:10 16.6	
	F	9	2:25 2.6	8:37 16.3	14:52 3.3	21:00 15.1	
☾	S	10	3:13 4.2	9:31 14.7	15:42 5.0	22:00 14.0	
	S	11	4:12 5.6	10:38 13.5	16:45 6.3	23:15 13.3	
	M	12	5:30 6.5	11:58 12.9	18:15 6.8	. . . . . .	
S	Tu	13	0:27 13.3	7:02 6.4	13:05 13.0	19:36 6.2	
A	W	14	1:32 13.9	8:13 5.5	14:06 13.6	20:34 5.0	
	Th	15	2:28 14.8	9:00 4.3	14:49 14.6	21:17 3.8	
	F	16	3:05 15.9	9:40 3.1	15:27 15.7	21:55 2.6	
	S	17	3:43 17.0	10:12 2.0	16:02 16.8	22:28 1.7	
●	S	18	4:17 17.9	10:45 1.1	16:35 17.6	23:00 1.1	
	M	19	4:50 18.5	11:17 0.6	17:07 18.1	23:31 0.9	
	Tu	20	5:21 18.9	11:48 0.5	17:37 18.3	. . . . . .	
E	W	21	0:01 1.0	5:52 18.8	12:20 0.7	18:08 18.1	
	Th	22	0:30 1.4	6:25 18.4	12:50 1.3	18:42 17.6	
	F	23	1:00 2.0	7:00 17.6	13:23 2.2	19:18 16.7	
	S	24	1:34 2.9	7:40 16.5	14:00 3.2	20:02 15.6	
☽	S	25	2:16 3.9	8:28 15.2	14:46 4.5	20:57 14.3	
	M	26	3:12 5.0	9:38 13.9	15:00 5.8	22:22 13.5	
N	Tu	27	5:36 6.0	11:13 13.4	17:31 6.5	. . . . . .	
	W	28	0:00 13.8	6:24 5.8	12:45 14.0	19:15 5.5	
	Th	29	1:15 15.1	7:50 4.2	13:53 15.3	20:23 3.6	
	MARCH.						
P	F	1	2:16 16.8	8:51 2.1	14:48 17.0	21:15 1.6	
	S	2	3:07 18.6	9:38 0.2	15:37 18.5	21:59 —0.1	
○	S	3	3:58 20.0	10:22 —1.1	16:18 19.6	22:40 —1.2	
E	M	4	4:37 20.9	11:02 —1.9	16:58 20.1	23:18 —1.7	
	Tu	5	5:17 21.1	11:40 —1.8	17:37 20.0	23:57 —1.4	
	W	6	5:54 20.6	12:18 —1.0	18:12 19.4	. . . . . .	
	Th	7	0:38 —0.5	6:32 19.5	12:55 —0.2	18:49 18.3	
	F	8	1:10 0.9	7:11 18.0	13:30 1.9	19:27 16.8	
	S	9	1:48 2.5	7:51 16.1	14:07 3.7	20:08 15.2	
☾	S	10	2:27 4.3	8:36 14.2	14:47 5.4	21:00 13.6	
S	M	11	3:17 5.8	9:36 12.7	15:42 6.8	22:17 12.6	
	Tu	12	4:32 7.0	11:10 12.0	17:17 7.7	23:51 12.5	
A	W	13	6:20 7.3	12:34 12.2	19:05 7.1	. . . . . .	
	Th	14	1:08 13.3	7:44 6.8	13:36 13.1	20:08 5.6	
	F	15	1:56 14.4	8:32 4.7	14:21 14.5	20:50 4.0	
	S	16	2:37 15.8	9:06 3.1	14:58 16.0	21:26 2.5	
	S	17	3:14 17.2	9:43 1.7	15:33 17.4	22:00 1.3	
●	M	18	3:48 18.4	10:16 0.9	16:07 18.5	22:32 0.4	
E	Tu	19	4:22 19.3	10:48 —0.2	16:40 19.2	23:04 0.0	
	W	20	4:55 19.8	11:20 —0.3	17:10 19.4	23:35 0.0	
	Th	21	5:27 19.7	11:58 0.0	17:43 19.1	. . . . . .	
	F	22	0:07 0.5	6:00 19.1	12:25 0.8	18:17 18.3	
	S	23	0:40 1.3	6:37 18.1	12:59 2.0	18:55 17.2	
	S	24	1:17 2.5	7:18 16.6	13:37 3.3	19:39 15.7	
	M	25	2:00 3.7	8:10 15.0	14:26 4.8	20:37 14.2	
N ☽	Tu	26	3:01 5.1	9:27 13.5	15:37 6.2	22:10 13.3	
	W	27	4:32 6.0	11:15 13.1	17:27 6.0	23:52 13.9	
P	Th	28	6:18 5.6	12:42 13.9	19:07 5.4	. . . . . .	
	F	29	1:05 15.2	7:39 4.1	13:45 15.3	20:10 3.4	
	S	30	2:08 17.0	8:35 2.0	14:34 17.0	20:57 1.4	
	S	31	2:50 18.6	9:20 0.2	15:17 18.5	21:38 —0.2	

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 9.7 feet (3.0 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	3:34 19.9	10:00 —0.9	15:56 19.5	22:18 —1.1
	Tu	2	4:14 20.6	10:40 —1.4	16:33 20.0	22:55 —1.5
	W	3	4:54 20.6	11:15 —1.2	17:09 19.9	23:32 —1.1
	Th	4	5:28 19.9	11:50 —0.4	17:43 19.2	. . . . .
	F	5	0:07 —0.1	6:01 18.8	12:24 0.9	18:15 18.1
	S	6	0:42 1.3	6:37 17.3	12:57 2.5	18:50 16.7
	S	7	1:18 2.9	7:11 15.6	13:30 4.2	19:27 15.1
S	M	8	1:58 4.5	7:50 14.0	14:04 5.7	20:12 13.6
☾	Tu	9	2:37 5.8	8:43 12.6	14:52 7.0	21:25 12.5
A	W	10	3:42 7.0	10:14 11.7	16:17 7.8	23:05 12.3
	Th	11	5:20 7.3	11:52 12.1	18:11 7.4	. . . . .
	F	12	0:20 13.1	6:48 6.5	12:54 13.1	19:22 6.0
	S	13	1:12 14.3	7:44 5.0	13:40 14.6	20:10 4.4
	S	14	1:57 15.8	8:27 3.3	14:20 16.2	20:47 2.7
E	M	15	2:36 17.3	9:05 1.7	14:57 17.7	21:23 1.3
	Tu	16	3:13 18.6	9:41 0.5	15:33 18.9	22:00 0.3
●	W	17	3:50 19.5	10:17 —0.3	16:10 19.6	22:35 —0.3
	Th	18	4:27 20.0	10:52 —0.4	16:44 19.8	23:10 —0.3
	F	19	5:02 19.8	11:28 0.0	17:20 19.4	23:47 0.2
	S	20	5:40 19.2	12:06 0.9	17:57 18.6	. . . . .
	S	21	0:25 0.1	6:21 18.0	12:45 2.1	18:40 17.4
N P	M	22	1:08 2.2	7:08 16.5	13:28 3.6	19:30 15.8
	Tu	23	1:59 3.5	8:08 14.9	14:25 5.0	20:38 14.5
☽	W	24	3:05 4.7	9:33 13.6	15:43 6.0	22:10 14.0
	Th	25	4:32 5.3	11:11 13.6	17:21 6.0	23:38 14.6
	F	26	6:02 4.8	12:27 14.4	18:43 4.9	. . . . .
	S	27	0:47 15.8	7:14 3.6	13:23 15.7	19:43 3.2
E	S	28	1:40 17.1	8:10 2.1	14:10 17.0	20:32 1.6
	M	29	2:27 18.3	8:55 0.8	14:50 18.2	21:14 0.4
	Tu	30	3:09 19.1	9:35 0.0	15:31 19.0	21:54 —0.3

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	3:49 19.5	10:13 —0.3	16:06 19.3	22:32 —0.5
	Th	2	4:27 19.3	10:50 0.0	16:42 19.1	23:09 —0.1
	F	3	5:03 18.6	11:25 0.8	17:17 18.5	23:45 0.8
	S	4	5:36 17.6	12:00 1.9	17:43 17.6	. . . . .
S	S	5	0:20 2.0	6:07 16.4	12:33 3.1	18:23 16.4
	M	6	0:56 3.3	6:42 15.1	13:05 4.5	19:00 15.1
A	Tu	7	1:32 4.6	7:20 14.0	13:40 3.8	19:44 13.9
	W	8	2:13 5.6	8:10 12.9	14:26 6.6	20:46 13.0
☾	Th	9	3:10 6.3	9:26 12.3	15:32 7.1	22:07 12.7
	F	10	4:22 6.6	10:55 12.5	16:58 7.1	23:25 13.3
	S	11	5:37 6.2	12:00 13.4	18:15 6.2	. . . . .
	S	12	0:22 14.4	6:42 5.1	12:52 14.7	19:14 4.8
E	M	13	1:10 15.7	7:34 3.7	13:35 16.1	20:02 3.3
	Tu	14	1:54 17.0	8:20 2.2	14:18 17.5	20:45 1.9
	W	15	2:37 18.2	9:04 1.1	15:00 18.7	21:06 0.8
●	Th	16	3:19 19.1	9:46 0.3	15:40 19.4	22:07 0.1
	F	17	4:01 19.6	10:28 0.1	16:28 19.6	22:50 —0.2
	S	18	4:43 19.4	11:10 0.4	17:02 19.4	23:33 0.1
N P	S	19	5:25 18.8	11:54 1.0	17:46 18.7	. . . . .
	M	20	0:18 0.7	6:13 17.8	12:40 2.0	18:35 17.7
	Tu	21	1:07 1.6	7:07 16.5	13:29 3.2	19:32 16.5
	W	22	2:02 2.7	8:12 15.3	14:27 4.2	20:40 15.6
☽	Th	23	3:05 3.6	9:28 14.6	15:35 4.9	21:57 15.2
	F	24	4:17 4.1	10:48 14.5	16:58 5.0	23:18 15.5
E	S	25	5:32 4.1	11:55 15.0	18:07 4.5	. . . . .
	S	26	0:17 16.1	6:38 3.6	12:52 15.8	19:08 3.5
	M	27	1:12 16.7	7:38 2.8	13:40 16.5	20:02 2.5
	Tu	28	2:00 17.3	8:27 2.0	14:23 17.3	20:50 1.6
	W	29	2:43 17.7	9:10 1.5	15:08 17.9	21:32 1.0
○	Th	30	3:25 17.8	9:51 1.3	15:42 18.1	22:12 1.0
	F	31	4:04 17.7	10:29 1.4	16:20 18.0	22:52 1.2

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	4:42 17.2	11:06 1.9	16:57 17.7	23:28 1.7
	S	2	5:17 16.5	11:43 2.5	17:30 17.0	. . . . .
	M	3	0:05 2.5	5:49 15.8	12:17 3.5	18:07 16.3
A	Tu	4	0:41 3.3	6:23 15.1	12:51 4.3	18:43 15.4
	W	5	1:17 4.1	7:02 14.3	13:27 5.1	19:25 14.6
	Th	6	1:56 4.8	7:49 13.8	14:06 5.7	20:15 14.0
	F	7	2:38 5.2	8:46 13.4	14:54 6.0	21:15 13.6
☾	S	8	3:31 5.4	9:52 13.3	15:54 6.1	22:19 13.8
E	S	9	4:31 5.4	10:58 13.8	17:00 5.9	23:23 14.4
	M	10	5:36 5.0	11:59 14.6	18:08 5.2	. . . . .
	Tu	11	0:20 15.3	6:40 4.2	12:51 15.7	19:10 4.1
	W	12	1:13 16.3	7:38 3.2	13:40 16.8	20:05 2.8
	Th	13	2:08 17.4	8:31 2.2	14:30 17.9	20:58 1.6
	F	14	2:52 18.2	9:22 1.3	15:17 18.7	21:47 0.7
● N	S	15	3:42 18.8	10:10 0.8	16:05 19.2	22:36 0.1
P	S	16	4:30 18.9	10:58 0.6	16:52 19.4	23:23 —0.1
	M	17	5:17 18.6	11:40 0.8	17:38 19.1	. . . . .
	Tu	18	0:13 0.1	6:18 18.1	12:38 1.2	18:30 18.5
	W	19	1:02 0.6	7:02 17.3	13:22 1.9	19:25 17.8
	Th	20	1:24 1.4	8:00 16.5	14:14 2.7	20:25 17.0
☽	F	21	2:47 2.3	9:08 15.8	15:12 3.5	21:29 16.4
E	S	22	3:47 3.1	10:10 15.3	16:15 4.1	22:36 16.0
	S	23	4:52 3.8	11:14 15.2	17:22 4.3	23:40 15.8
	M	24	5:57 4.0	12:13 15.3	18:29 4.2	. . . . .
	Tu	25	0:38 15.7	7:01 4.0	13:07 15.7	19:32 3.8
	W	26	1:32 15.9	8:00 3.6	13:57 16.1	20:27 3.2
	Th	27	2:20 16.0	8:48 3.0	14:41 16.5	21:15 2.6
	F	28	3:05 16.2	9:33 2.7	15:24 16.9	21:58 2.2
S ○	S	29	3:47 16.3	10:14 2.4	16:04 17.1	22:38 2.1
	S	30	4:35 16.2	10:52 2.4	16:43 17.2	23:15 2.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 9.7 feet (3.0 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	5:03 16.1	11:28 2.6	17:08 17.0	23:50 2.4
A	Tu	2	5:37 15.9	12:02 3.0	17:52 16.7	. . . . .
	W	3	0:25 2.8	6:07 15.7	12:36 3.5	18:27 16.3
	Th	4	0:58 3.1	6:43 15.4	13:08 4.0	19:02 15.8
	F	5	1:31 3.6	7:23 15.1	13:41 4.4	19:42 15.3
E	S	6	2:06 4.0	8:07 14.7	14:18 4.7	20:26 14.9
☾	S	7	2:47 4.3	8:57 14.4	15:01 5.0	21:20 14.5
	M	8	3:36 4.6	9:55 14.2	15:57 5.3	22:22 14.4
	Tu	9	4:36 4.9	11:02 14.4	17:05 5.3	23:30 14.7
	W	10	5:46 4.9	12:09 14.9	18:22 4.9	. . . . .
	Th	11	0:38 15.3	7:00 4.4	13:10 15.8	19:35 3.8
	F	12	1:38 16.2	8:07 3.4	14:07 17.0	20:48 2.5
N	S	13	2:35 17.2	9:07 2.2	15:01 18.1	21:33 1.1
●	S	14	3:30 18.1	10:00 1.0	15:53 19.0	22:26 0.0
P	M	15	4:20 18.7	10:48 0.3	16:43 19.7	23:13 —0.7
	Tu	16	5:10 19.0	11:33 —0.1	17:28 19.9	. . . . .
	W	17	0:00 —0.9	5:57 18.9	12:19 0.0	18:18 19.8
	Th	18	0:47 —0.6	6:45 18.4	13:04 0.5	19:07 19.2
E	F	19	1:32 0.2	7:35 17.7	13:50 1.3	20:00 18.2
	S	20	2:20 1.2	8:28 16.8	14:39 2.4	20:53 17.0
☽	S	21	3:10 2.5	9:25 15.7	15:33 3.5	21:53 15.9
	M	22	4:07 3.8	10:32 15.0	16:35 4.6	22:59 15.0
	Tu	23	5:12 4.9	11:32 14.6	17:46 5.2	. . . . .
	W	24	0:06 14.5	6:25 5.4	12:35 14.5	19:02 5.1
	Th	25	1:07 14.3	7:35 5.1	13:33 14.9	20:10 4.5
S	F	26	2:04 14.6	8:33 4.3	14:24 15.5	21:02 3.7
	S	27	2:52 15.0	9:20 3.5	15:10 16.2	21:16 2.9
	S	28	3:34 15.6	10:10 2.8	15:52 16.8	22:23 2.3
○ A	M	29	4:12 16.1	10:37 2.3	16:28 17.2	22:59 1.9
	Tu	30	4:46 16.5	11:11 2.1	17:03 17.5	23:30 1.7
	W	31	5:18 16.8	11:45 2.0	17:32 17.6	. . . . .

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:02 1.7	5:48 16.8	12:13 2.8	18:03 17.5
E	F	2	0:33 2.0	6:18 16.8	12:48 2.6	18:35 17.2
	S	3	1:02 2.3	6:51 16.5	13:10 3.1	19:08 16.7
	S	4	1:32 2.8	7:27 16.0	13:42 3.6	19:46 16.0
	M	5	2:07 3.3	8:10 15.3	14:21 4.1	20:31 15.2
☾	Tu	6	2:50 4.2	9:02 14.5	15:10 4.8	21:30 14.4
	W	7	3:47 5.0	10:11 13.9	16:18 5.5	22:48 14.0
	Th	8	5:08 5.7	11:34 14.0	17:48 5.6	. . . . .
N	F	9	0:13 14.3	6:37 5.5	12:51 15.0	19:18 4.6
	S	10	1:25 15.2	7:56 4.2	13:55 16.4	20:28 2.9
	S	11	2:27 16.6	8:58 2.4	14:50 17.9	21:25 1.1
P ●	M	12	3:20 18.0	9:48 0.8	15:42 19.4	22:15 —0.4
	Tu	13	4:10 19.0	10:38 —0.4	16:29 20.4	22:58 —1.4
	W	14	4:55 19.7	11:17 —1.1	17:13 20.8	23:41 —1.8
E	Th	15	5:38 19.9	11:58 —1.2	17:57 20.8	. . . . .
	F	16	0:23 —1.4	6:20 19.4	12:40 —0.7	18:40 20.0
	S	17	1:04 —0.4	7:02 18.6	13:21 0.4	19:27 18.8
	S	18	1:47 1.0	7:47 17.3	14:05 1.8	20:15 17.1
☽	M	19	2:18 2.6	8:37 15.8	14:52 3.5	21:08 15.4
	Tu	20	3:21 4.3	9:35 14.5	15:50 4.9	22:14 13.9
	W	21	4:22 5.8	10:50 13.7	17:02 6.0	23:32 13.2
S	Th	22	5:48 6.6	12:07 13.5	18:35 6.3	. . . . .
	F	23	0:47 13.1	7:15 6.2	13:13 13.9	19:53 5.5
	S	24	1:49 13.6	8:18 5.1	14:08 14.8	20:47 4.4
A	S	25	2:37 14.5	9:03 3.8	14:52 15.9	21:27 3.2
	M	26	3:15 15.5	9:41 2.7	15:30 16.8	22:00 2.1
○	Tu	27	3:50 16.5	10:15 1.8	16:04 17.7	22:32 1.3
	W	28	4:21 17.4	10:46 1.2	16:37 18.3	23:02 0.8
	Th	29	4:52 17.9	11:17 1.0	17:08 18.7	23:33 0.7
E	F	30	5:20 18.1	11:45 1.1	17:35 18.6	. . . . .
	S	31	0:02 0.9	5:50 18.0	12:13 1.5	18:05 18.3

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	0:30 1.5	6:20 17.6	12:42 2.1	18:37 17.7
	M	2	1:00 2.2	6:58 16.9	13:12 2.8	19:13 16.7
	Tu	3	1:36 3.2	7:32 15.9	13:49 3.7	19:57 15.5
☾	W	4	2:16 4.3	8:22 14.6	14:40 4.7	20:55 14.1
	Th	5	3:12 5.5	9:36 13.5	15:58 5.8	22:27 13.2
N	F	6	4:40 6.5	11:16 13.4	17:37 6.0	. . . . .
	S	7	0:08 13.6	6:31 6.1	12:42 14.6	19:13 4.8
	S	8	1:22 14.8	7:52 4.4	13:45 16.3	20:20 2.8
P	M	9	2:20 16.5	8:47 2.3	14:40 18.1	21:11 0.8
	Tu	10	3:08 18.2	9:33 0.4	15:27 19.7	21:57 —0.8
●	W	11	3:52 19.4	10:15 —1.0	16:11 20.8	22:38 —1.8
E	Th	12	4:33 20.2	10:56 —1.7	16:53 21.3	23:18 —2.0
	F	13	5:13 20.4	11:34 —1.7	17:32 21.0	23:56 —1.4
	S	14	5:52 19.9	12:13 —1.0	18:12 20.0	. . . . .
	S	15	0:35 —0.3	6:27 18.8	12:51 0.3	18:52 18.5
	M	16	1:12 1.3	7:08 17.4	13:32 1.9	19:34 16.6
	Tu	17	1:52 3.2	7:52 15.7	14:15 3.7	20:22 14.7
☽ S	W	18	2:35 5.0	8:46 14.0	15:07 5.3	21:27 13.1
	Th	19	3:33 6.5	10:02 13.0	16:20 6.6	23:00 12.2
	F	20	5:07 7.4	11:37 13.2	18:03 7.0	. . . . .
A	S	21	0:25 12.4	6:50 6.9	12:50 13.4	19:27 6.1
	S	22	1:27 13.2	7:53 5.6	13:43 14.5	20:18 4.7
	M	23	2:10 14.5	8:36 4.1	14:25 15.7	20:55 3.3
	Tu	24	2:45 15.8	9:12 2.7	15:00 17.0	21:27 2.0
	W	25	3:18 17.1	9:44 1.5	15:33 18.1	21:59 1.0
E ○	Th	26	3:49 18.1	10:15 0.8	16:05 18.9	22:31 0.3
	F	27	4:20 18.8	10:46 0.4	16:36 19.3	23:02 0.1
	S	28	4:52 19.0	11:16 0.4	17:06 19.3	23:32 0.4
	S	29	5:21 18.9	11:46 0.8	17:37 18.9	. . . . .
	M	30	0:03 1.1	5:58 18.3	12:18 1.5	18:12 18.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 9.7 feet (3.0 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	0:38	6:28	12:52	18:50
			2.2	17.3	2.5	16.8
	W	2	1:10	7:08	13:33	19.37
			3.3	16.0	3.7	15.3
N ☾	Th	3	1:55	8:00	14:28	20:44
			4.6	14.5	4.8	13.7
	F	4	2:58	9:25	15:50	22.28
			6.0	13.3	5.9	12.9
	S	5	4:38	11:13	17:34	. . .
			6.8	13.5	5.9	. . .
	S	6	0:07	6:27	12:33	19:02
			13.6	5.9	14.9	4.5
P	M	7	1:15	7:37	13:33	20:03
			15.0	4.1	16.5	2.6
	Tu	8	2:06	8:28	14:22	20:52
			16.7	2.0	18.3	0.7
E	W	9	2:50	9:12	15:06	21:34
			18.3	0.2	19.7	—0.7
●	Th	10	3:30	9:52	15:48	22:15
			19.5	—1.0	20.6	—1.4
	F	11	4:06	10:32	16:28	22:52
			20.2	—1.5	20.8	—1.4
	S	12	4:45	11:10	17:07	23:30
			20.2	—1.4	20.3	—0.7
	S	13	5:28	11:48	17:43	. . .
			19.7	—0.6	19.2	. . .
	M	14	0:05	5:58	12:26	18:20
			0.5	18.6	0.7	17.7
	Tu	15	0:42	6:35	13:05	18:58
			2.1	17.2	2.3	16.0
S	W	16	1:20	7:15	13:45	19:42
			3.7	15.6	4.0	14.2
	Th	17	2:00	8:06	14:34	20:41
			5.4	14.0	5.5	12.7
☽	F	18	2:54	9:20	15:43	22:15
			6.7	12.8	6.7	11.9
A	S	19	4:18	10:55	17:12	23:44
			7.5	12.6	7.0	12.2
	S	20	6:00	12:10	18:35	. . .
			7.2	13.2	6.4	. . .
	M	21	0:45	7:08	13:02	19:30
			13.1	6.0	14.2	5.1
	Tu	22	1:30	7:55	13:43	20:12
			14.4	4.6	15.5	3.6
E	W	23	2:06	8:32	14:21	20:47
			15.9	3.1	16.9	2.2
	Th	24	2:40	9:08	14:56	21:22
			17.2	1.8	18.0	1.0
	F	25	3:15	9:41	15:30	21:57
			18.5	0.8	18.9	0.3
○	S	26	3:49	10:15	16:05	22:31
			19.2	0.3	19.5	0.1
	S	27	4:23	10:50	16:40	23:06
			19.5	0.1	19.5	0.4
	M	28	4:57	11:25	17:16	23:43
			19.3	0.5	19.0	1.1
	Tu	29	5:33	12:02	17:55	. . .
			18.6	1.2	18.0	. . .
N	W	30	0:20	6:13	12:43	18:38
			2.2	17.5	2.2	16.7
	Th	31	1:01	7:00	13:31	19:34
			3.5	16.2	3.3	15.1

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	1:52	8:01	14:33	20:50
			4.8	14.7	4.5	13.8
☾	S	2	3:01	9:26	15:51	22:37
			5.9	13.9	5.2	13.4
P	S	3	4:35	11:00	17:20	23:52
			6.2	14.3	5.0	14.1
	M	4	6:04	12:13	18:37	. . .
			5.4	15.4	4.0	. . .
E	Tu	5	0:54	7:12	13.11	19:38
			15.3	3.8	16.7	2.6
	W	6	1:42	8:08	14:00	20:28
			16.7	2.2	18.0	1.8
	Th	7	2:25	8:48	14:40	21:11
			18.0	0.8	19.0	0.2
	F	8	3:07	9:30	15:27	21:51
			18.9	—0.2	19.5	—0.2
●	S	9	3:44	10:10	16:05	22:30
			19.4	—0.6	19.5	—0.2
	S	10	4:22	10:50	16:43	23:07
			19.5	—0.4	19.0	0.4
	M	11	4:59	11:28	17:21	23:43
			19.0	0.3	18.0	1.4
S	Tu	12	5:34	12:07	17:55	. . .
			18.1	1.4	16.8	. . .
	W	13	0:20	6:11	12:45	18:32
			2.6	16.9	2.7	15.5
	Th	14	0:57	6:52	13:25	19:14
			4.0	15.6	4.0	15.3
	F	15	1:37	7:38	14:10	20:06
			5.3	14.3	5.3	13.1
A	S	16	2:24	8:38	15:02	21:08
☽			6.3	13.2	6.1	12.4
	S	17	3:26	9:54	16:10	22:43
			7.0	12.9	6.5	12.5
	M	18	4:44	11:10	17:20	23:46
			7.0	13.2	6.2	13.2
	Tu	19	5:59	12:07	18:23	. . .
			6.4	14.0	5.5	. . .
E	W	20	0:36	6:57	12:58	19:16
			14.3	5.3	15.1	4.2
	Th	21	1:19	7:44	13:37	20:02
			15.5	3.9	16.3	3.0
	F	22	2:00	8:27	14:18	20:45
			16.9	2.6	17.4	1.8
	S	23	2:40	9:08	14:59	21:27
			18.0	1.5	18.4	1.0
○	S	24	3:20	9:48	15:40	22:07
			18.9	0.7	19.0	0.6
	M	25	4:01	10:30	16:20	22:49
			19.3	0.3	19.1	0.6
N	Tu	26	4:41	11:12	17:08	23:30
			19.3	0.3	18.8	1.1
	W	27	5:22	11:55	17:48	. . .
			18.8	0.7	18.0	. . .
P	Th	28	0:15	6:08	12:42	18.37
			1.9	18.0	1.4	16.9
	F	29	1:02	7:00	13:33	19:36
			2.8	16.9	2.4	15.7
	S	30	1:55	8:02	14:32	20:46
			3.8	15.9	3.3	14.8

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	3:58	9:15	15:38	22:05
			4.7	15.2	3.9	14.4
	M	2	4:10	10:32	16:51	23:20
			5.0	15.3	4.2	14.7
E	Tu	3	5:26	11:43	18:03	. . .
			4.8	15.7	3.9	. . .
	W	4	0:21	6:35	12:42	19:06
			15.3	4.0	16.3	3.3
	Th	5	1:13	7:34	13:34	20:02
			16.2	3.0	17.0	2.5
	F	6	2:00	8:26	14:22	20:48
			17.0	2.0	17.5	1.7
	S	7	2:43	9:12	15:06	21:32
			17.7	1.2	17.8	1.3
●	S	8	3:25	9:55	15:48	22:13
			18.2	0.8	17.8	1.2
S	M	9	4:05	10:36	16:27	22:52
			18.3	0.8	17.5	1.4
	Tu	10	4:44	11:15	17:05	23:30
			18.1	1.2	17.0	2.0
	W	11	5:20	11:53	17.42	. . .
			17.6	1.8	16.3	. . .
	Th	12	0:07	5:57	12:30	18:15
			2.8	16.9	2.7	15.5
	F	13	0:42	6:35	13:07	18:54
			3.6	16.0	3.5	14.8
A	S	14	1:18	7:15	13:45	19:37
			4.5	15.1	4.3	14.1
	S	15	1:57	8:00	14:25	20:27
			5.3	14.3	5.0	13.6
☽	M	16	2:39	8:53	15:11	21:26
			5.8	13.8	5.4	13.3
E	Tu	17	3:30	9:53	16:05	22:30
			6.1	13.6	5.6	13.4
	W	18	4:31	10:55	17:07	23:35
			6.2	13.8	5.5	14.0
	Th	19	5:40	11:57	18:12	. . .
			5.8	14.5	5.0	. . .
	F	20	0:30	6:46	12:51	19:13
			14.9	4.9	15.4	4.1
	S	21	1:21	7:45	13:42	20:10
			16.0	3.8	16.4	3.1
	S	22	2:10	8:38	14:32	21:02
			17.1	2.5	17.4	2.1
	M	23	2:58	9:28	15:22	21:51
			18.1	1.3	18.3	1.2
N ○	Tu	24	3:45	10:15	16:10	22:38
			18.8	0.5	18.6	0.7
	W	25	4:31	11:02	16:57	23:23
			19.2	0.0	18.7	0.6
P	Th	26	5:15	11:50	17:43	. . .
			19.4	—0.1	18.5	. . .
	F	27	0:09	6:04	12:37	18:33
			0.9	19.0	0.2	17.9
	S	28	0:51	6:55	13:25	19:23
			1.4	18.4	0.8	17.0
	S	29	1:44	7:50	14:15	20:25
			2.2	17.5	1.7	16.2
E ☾	M	30	2:37	8:50	15:11	21:28
			3.0	16.7	2.7	15.5
	Tu	31	3:35	9:55	16:12	22:36
			3.8	16.0	3.6	15.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day, a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 9.7 feet (3.0 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0h is midnight, 12h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.								FEBRUARY.								MARCH.							
Moon.	Day of—		Time and Height of High and Low Water.					Moon.	Day of—		Time and Height of High and Low Water.					Moon.	Day of—		Time and Height of High and Low Water.				
	W.	Mo.							W.	Mo.							W.	Mo.					
	M	1	0:40	6:14	13:32	18:50			Th	1	2:56	8:32	15:27	21:12		P	F	1	2:48	8:45	15:12	21:14	
			3.7	18.8	3.3	18.9					2.0	20.1	0.4	20.6					2.2	19.8	0.2	20.7	
	Tu	2	2:00	7:25	14:40	20:00		P	F	2	3:50	9:28	16:20	22:03			S	2	3:40	9:30	16:04	21:57	
			2.6	20.0	1.7	20.2					0.4	21.5	—1.3	21.7					0.1	21.7	—1.8	22.2	
	W	3	3:03	8:23	15:36	20:55		○	S	3	4:43	10:17	17:10	22:50		○	S	3	4:28	10:12	16:50	22:37	
			1.3	21.1	0.2	21.1					—0.9	22.4	—2.5	22.4					—1.5	22.9	—3.1	23.0	
N	Th	4	4:00	9:14	16:30	21:48			S	4	5:30	11:00	17:58	23:34		E	M	4	5:18	10:50	17:26	23:13	
○			0.3	21.9	—0.9	21.7					—1.8	22.9	—3.1	22.6					—2.4	23.5	—3.5	23.3	
P	F	5	4:54	10:04	17:22	22:40			M	5	6:20	11:44	18:42	. . .			Tu	5	5:55	11:24	18:18	23:47	
			—0.4	22.2	—1.6	21.8					—2.0	22.9	—3.1	. . .					—2.6	23.5	—3.3	23.1	
	S	6	5:47	10:58	18:12	23:30		E	Tu	6	0:13	7:04	12:20	19:25			W	6	6:38	11:53	18:57	. . .	
			—0.7	22.2	—2.0	21.7					22.4	—1.7	22.6	—2.4					—2.2	23.1	—2.4	. . .	
	S	7	6:35	11:43	19:00	. . .			W	7	0:46	7:44	12:50	20:06			Th	7	0:14	7:16	12:20	19:34	
			—0.8	22.0	—2.0	. . .					21.9	—0.8	21.8	—1.0					22.6	—1.1	22.3	—0.9	
	M	8	0:18	7:25	12:28	19:50			Th	8	1:15	8:25	13:23	20:42			F	8	0:40	7:50	12:50	20:08	
			21.3	—0.4	21.4	—1.3					21.0	—0.3	20.7	0.8					21.7	0.3	21.2	0.9	
	Tu	9	1:00	8:13	13:10	20:34			F	9	1:47	9:00	13:57	21:22			S	9	1:10	8:20	13:23	20:34	
			20.6	0.4	20.6	—0.2					19.8	2.4	19.2	2.8					20.6	2.1	19.8	2.9	
E	W	10	1:43	8:55	13:50	21:22		☾	S	10	2:22	9:43	14:39	22:10		☾	S	10	1:42	8:46	13:57	21:00	
			19.7	1.7	19.5	1.3					18.4	4.3	17.5	4.8					19.1	3.8	18.0	4.8	
☾	Th	11	2:28	9:45	14:36	22:14			S	11	3:06	10:50	15:34	23:34		S	M	11	2:22	9:20	14:46	21:45	
			18.6	3.2	18.1	3.0					16.8	5.9	15.7	6.3					17.4	5.7	16.1	6.7	
	F	12	3:25	10:45	15:40	23:18			M	12	4:30	12:22	18:37	. . .			Tu	12	3:14	11:22	15:52	. . .	
			17.3	4.5	16.7	4.3					15.5	6.5	15.2	. . .					15.5	7.2	14.3	. . .	
	S	13	5:28	11:54	18:00	. . .		S	Tu	13	1:00	7:10	13:35	19:45		A	W	13	0:20	6:42	13:00	19:24	
			16.7	5.2	16.2	. . .					6.4	16.0	5.8	16.2					7.6	14.9	6.8	15.5	
	S	14	0:28	6:40	13:03	19:10		A	W	14	2:05	8:07	14:33	20:37			Th	14	1:38	7:47	14:07	20:17	
			4.8	16.9	5.0	16.7					5.5	17.2	4.4	17.5					6.6	16.8	5.3	17.2	
	M	15	1:32	7:35	14:03	20:02			Th	15	2:57	8:54	15:22	21:20			F	15	2:32	8:34	15:00	20:57	
			4.5	17.7	4.1	17.5					4.2	18.4	3.1	18.7					4.9	18.0	3.5	18.7	
	Tu	16	2:28	8:28	14:53	20:48			F	16	3:43	9:35	16:02	21:57			S	16	3:18	9:14	15:34	21:35	
			3.8	18.6	3.1	18.4					3.1	19.4	2.0	19.5					3.4	19.3	2.2	19.7	
S	W	17	3:15	9:04	15:40	21:30			S	17	4:22	10:10	16:40	22:32			S	17	3:53	9:48	16:10	22:04	
			3.1	19.3	2.3	19.1					2.3	20.0	1.3	20.0					2.3	20.2	1.2	20.4	
A	Th	18	4:00	9:43	16:22	22:08		●	S	18	4:57	10:37	17:14	22:50		●	M	18	4:28	10:08	16:43	22:20	
			2.6	19.7	1.8	19.4					1.9	20.4	0.9	20.1					1.5	20.8	0.6	20.8	
●	F	19	4:42	10:18	17:00	22:40			M	19	5:30	10:45	17:43	22:57		E	Tu	19	5:00	10:17	17:12	22:28	
			2.8	19.9	1.6	19.5					1.6	20.7	0.7	20.5					1.0	21.3	0.2	21.4	
	S	20	5:20	10:43	17:38	23:00			Tu	20	5:57	11:00	18:10	23:17			W	20	5:28	10:34	17:40	22:48	
			2.8	20.0	1.5	19.5					1.5	21.3	0.5	21.2					0.7	22.0	0.0	22.0	
	S	21	5:53	10:57	18:08	23:14		E	W	21	6:22	11:25	18:32	23:43			Th	21	5:55	11:00	18:08	23:18	
			2.3	20.1	1.4	19.7					1.2	22.0	0.4	21.8					0.5	22.6	0.0	22.6	
	M	22	6:24	11:20	18:35	23:38			Th	22	6:43	11:57	18:57	. . .			F	22	6:22	11:36	18:35	23:53	
			2.4	20.4	1.4	20.1					1.0	22.5	0.3	. . .					0.4	22.9	0.2	22.8	
	Tu	23	6:45	11:50	18:56	. . .			F	23	0:18	7:12	12:32	19:28			S	23	6:52	12:12	19:08	. . .	
			2.4	21.0	1.3	. . .					22.3	1.0	22.6	0.7					0.6	22.7	0.8	. . .	
E	W	24	0:08	7:10	12:25	19:22			S	24	0:53	7:46	13:14	20:04			S	24	0:30	7:28	12:52	19:46	
			20.6	2.2	21.4	1.2					22.2	1.4	22.0	1.6					22.5	1.2	21.9	2.0	
	Th	25	0:42	7:36	12:57	19:52		☽	S	25	1:35	8:28	13:57	20:47			M	25	1:12	8:10	13:37	20:32	
			21.0	2.2	21.4	1.4					21.4	2.5	20.6	3.0					21.4	2.5	20.3	3.7	
	F	26	1:20	8:12	13:38	20:32			M	26	2:24	9:19	14:52	21:48		N	Tu	26	2:00	9:04	14:32	21:37	
			21.0	2.5	21.0	2.0					19.9	4.0	18.7	4.8		☽			19.5	4.2	18.1	5.6	
☽	S	27	2:05	8:53	14:28	21:20		N	Tu	27	3:24	10:38	16:05	23:45			W	27	3:00	10:48	15:47	. . .	
			20.4	3.2	19.9	3.1					18.0	5.4	16.8	6.0					17.4	5.6	16.1	. . .	
	S	28	3:00	9:50	15:27	22:22			W	28	4:48	13:00	19:08	. . .		P	Th	28	0:00	4:28	12:52	19:20	
			19.3	4.2	18.6	4.3					16.7	4.9	16.5	. . .					6.3	15.8	4.8	16.6	
	M	29	4:00	11:10	16:40	. . .			Th	29	1:42	7:45	14:18	20:25			F	29	1:30	7:45	14:00	20:18	
			18.3	4.9	17.5	. . .					4.5	17.6	2.6	18.7					4.5	17.6	2.3	19.0	
	Tu	30	0:00	5:22	13:10	18:18											S	30	2:30	8:35	14:50	21:00	
			4.9	17.8	4.8	17.6													2.0	20.0	—0.1	21.0	
N	W	31	1:48	7:08	14:28	20:10											S	31	3:20	9:16	15:42	21:38	
			3.8	18.6	2.4	19.0													—0.2	21.8	—1.8	22.4	

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Lower Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 11.3 feet (3.4 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0ʰ is midnight, 12ʰ is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	4:07	9:53	16:27	22:13
			−1.6	22.9	−2.7	23.2
	Tu	2	4:50	10:25	17:10	22:45
			−2.3	23.3	−2.9	23.3
	W	3	5:30	10:57	17:50	23:12
			−2.3	23.2	−2.5	23.1
	Th	4	6:10	11:25	18:29	23:40
			−1.7	22.7	−1.4	22.5
	F	5	6:47	11:52	19:04	. . .
			−0.7	22.0	0.0	. . .
	S	6	0:09	7:23	12:22	19:35
			21.7	0.6	21.0	1.5
	S	7	0:37	7:48	12:56	20:00
			20.7	2.1	19.7	3.2
S	M	8	1:09	8:11	13:23	20:28
			19.4	3.5	18.3	4.4
☾	Tu	9	1:48	8:42	14:12	21:30
			17.7	5.1	16.6	6.6
A	W	10	2:35	9:34	15:15	23:19
			16.0	6.6	14.9	7.8
	Th	11	3:45	12:10	18:51	. . .
			14.5	7.1	15.2	. . .
	F	12	0:55	7:11	13:23	19:45
			7.1	15.8	6.0	16.8
	S	13	1:54	8:02	14:15	20:26
			5.6	17.5	4.2	18.4
	S	14	2:33	8:42	14:55	21:00
			3.9	18.9	2.7	19.6
E	M	15	3:17	9:08	15:33	21:25
			2.5	20.0	1.5	20.5
	Tu	16	3:52	9:26	16:04	21:35
			1.5	20.9	0.7	21.2
●	W	17	4:25	9:39	16:38	21:53
			0.8	21.6	0.3	21.9
	Th	18	4:56	10:04	17:12	22:21
			0.4	22.2	0.1	22.4
	F	19	5:31	10:38	17:47	23:00
			0.1	22.5	0.3	22.6
	S	20	6:09	11:15	18:25	23:34
			0.2	22.5	0.7	22.5
	S	21	6:45	11:56	19:03	. . .
			0.6	22.0	1.5	. . .
N P	M	22	0:13	7:26	12:38	19:46
			21.9	1.5	21.0	2.7
	Tu	23	0:58	8:15	13:26	20:41
			20.6	2.7	19.5	4.2
☽	W	24	1:47	9:20	14:22	22:05
			18.9	4.1	17.5	5.6
	Th	25	2:47	11:03	15:42	23:53
			19.9	5.0	15.9	5.7
	F	26	6:20	12:32	19:02	. . .
			16.0	4.0	17.2	. . .
	S	27	1:08	7:26	13:37	19:55
			4.1	17.9	2.2	19.2
E	S	28	2:08	8:13	14:32	20:37
			2.0	19.8	0.4	20.8
	M	29	2:58	8:52	15:19	21:11
			0.2	21.3	−1.0	22.0
	Tu	30	3:43	9:26	16:02	21:44
			−0.9	22.1	−1.6	22.6
MAY.						
○	W	1	4:23	10:00	16:44	22:14
			−1.4	22.4	−1.5	22.6
	Th	2	5:04	10:30	17:25	22:39
			−1.3	22.2	−0.9	22.3
	F	3	5:44	10:56	18:03	23:07
			−0.7	21.7	0.1	21.8
	S	4	6:24	11:25	18:43	23:41
			0.2	21.0	1.2	21.0
S	S	5	7:00	11:58	19:13	. . .
			1.2	20.2	2.4	. . .
	M	6	0:10	7:30	12:29	19:43
			20.2	2.3	19.4	3.6
A	Tu	7	0:43	7:54	13:06	20:07
			19.3	3.3	18.4	4.7
	W	8	1:21	8:23	13:49	20:43
			18.1	4.4	17.2	5.8
☾	Th	9	2:07	9:07	14:38	21:41
			16.9	5.4	16.0	6.8
	F	10	3:08	10:20	15:49	23:35
			15.7	6.2	15.2	7.1
	S	11	6:20	12:10	18:58	. . .
			15.4	6.0	16.3	. . .
	S	12	0:55	7:12	13:18	19:42
			6.1	16.7	4.7	17.8
E	M	13	1:48	7:59	14:04	20:12
			4.6	18.2	3.3	19.1
	Tu	14	2:31	8:20	14:45	20:30
			3.1	19.5	2.1	20.3
	W	15	3:11	8:37	15:25	20:49
			1.8	20.6	1.2	21.3
●	Th	16	3:50	9:04	16:07	21:20
			0.9	21.4	0.7	22.0
	F	17	4:31	9:40	16:50	21:56
			0.4	21.9	0.6	22.3
	S	18	5:27	10:19	17:36	22:36
			0.1	22.0	0.7	22.2
N P	S	19	6:02	11:08	18:24	23:19
			0.1	21.7	1.1	21.8
	M	20	6:50	11:45	19:12	. . .
			0.4	21.2	1.7	. . .
	Tu	21	0:03	7:40	12:33	20:03
			21.1	1.0	20.3	2.6
	W	22	0:49	8:33	13:23	21:01
			20.0	2.0	19.0	3.6
☽	Th	23	1:40	9:34	14:21	22:10
			18.7	3.0	17.6	4.5
	F	24	2:42	10:48	17:14	23:28
			17.2	3.6	16.6	4.7
E	S	25	5:46	12:02	18:32	. . .
			16.6	3.4	17.5	. . .
	S	26	0:39	6:53	13:07	19:24
			4.0	17.7	2.5	18.8
	M	27	1:38	7:45	14:08	20:06
			2.6	19.0	1.4	20.0
	Tu	28	2:30	8:26	14:52	20:49
			1.3	20.1	0.5	21.0
	W	29	3:19	9:02	15:38	21:16
			0.4	20.8	0.2	21.4
○	Th	30	4:00	9:36	16:20	21:48
			0.0	21.0	0.3	21.5
	F	31	4:42	10:08	17:02	22:16
			0.1	20.8	0.8	21.2
JUNE.						
S	S	1	5:24	10:36	17:44	22:45
			0.5	20.4	1.5	20.8
	S	2	6:05	11:06	18:25	23:15
			1.0	20.0	2.2	20.3
	M	3	6:40	11:35	19:00	23:48
			1.6	19.5	2.9	19.8
A	Tu	4	7:12	12:11	19:30	. . .
			2.2	19.1	3.5	. . .
	W	5	0:24	7:38	12:46	19:53
			19.3	2.8	18.7	4.2
	Th	6	1:00	8:05	13:25	20:23
			18.8	3.4	18.2	4.7
	F	7	1:40	8:39	14:07	21:03
			18.2	4.0	17.6	5.3
☾	S	8	2:27	9:26	15:00	22:00
			17.5	4.5	17.0	5.7
E	S	9	3:24	10:24	16:04	23:08
			16.8	4.9	16.8	5.7
	M	10	4:37	11:38	17:25	. . .
			16.8	4.8	17.3	. . .
	Tu	11	0:30	6:00	12:55	18:40
			5.0	17.5	4.0	18.5
	W	12	1:38	7:04	14:00	19:34
			3.7	18.8	2.9	19.8
	Th	13	2:34	7:58	14:51	20:13
			2.3	20.0	2.0	20.9
	F	14	3:24	8:37	15:44	20:54
			1.2	20.9	1.3	21.6
● N	S	15	4:12	9:22	16:37	21:40
			0.5	21.3	0.9	21.9
P	S	16	5:08	10:10	17:30	22:25
			−0.1	21.4	0.7	21.8
	M	17	6:00	11:00	18:24	23:14
			−0.5	21.3	0.6	21.5
	Tu	18	6:50	11:45	19:14	. . .
			−0.6	20.9	0.7	. . .
	W	19	0:02	7:40	12:40	20:04
			21.0	−0.3	20.3	1.2
	Th	20	0:50	8:30	13:26	20:55
			20.3	0.3	19.5	2.1
☽	F	21	1:41	9:22	14:28	21:49
			19.3	1.3	18.5	3.1
E	S	22	2:34	10:20	15:49	22:54
			18.1	2.5	17.5	3.9
	S	23	4:08	11:25	17:52	. . .
			17.0	3.3	17.4	. . .
	M	24	0:01	6:12	12:32	18:44
			4.2	17.1	3.4	17.9
	Tu	25	1:07	7:13	13:34	19:42
			3.7	17.8	3.1	18.7
	W	26	2:04	8:02	14:27	20:20
			2.8	18.5	2.5	19.5
	Th	27	2:58	8:43	15:15	21:00
			2.0	19.2	2.0	20.0
	F	28	3:40	9:23	16:01	21:34
			1.4	19.6	1.9	20.3
S ○	S	29	4:23	10:00	16:43	22:10
			1.1	19.8	1.9	20.2
	S	30	5:06	10:36	17:26	22:38
			1.1	19.7	2.1	20.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 11.3 feet (3.4 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	5:47	11:05	18:07	23:06
			1.3	19.5	2.4	19.9
A	Tu	2	6:25	11:30	18:40	23:35
			1.5	19.4	2.7	19.8
	W	3	6:54	11:56	19:10	. . .
			1.8	19.4	3.0	. . .
	Th	4	0:04	7:22	12:26	19:30
			19.8	2.1	19.4	3.2
	F	5	0:36	7:40	12:57	19:55
			19.5	2.2	19.5	3.4
E	S	6	1:12	8:10	13:35	20:28
			19.7	2.5	19.4	3.7
☾	S	7	1:53	8:46	14:18	21:10
			19.3	2.9	19.0	4.1
	M	8	2:40	9:30	15:10	22:04
			18.7	3.6	18.4	4.6
	Tu	9	3:37	10:30	16:12	23:12
			18.0	4.2	18.0	4.8
	W	10	4:46	11:44	17:26	. . .
			17.6	4.4	18.2	. . .
	Th	11	0:44	6:06	13:16	18:40
			4.3	18.0	3.9	19.0
	F	12	2:05	7:20	14:30	19:47
			3.0	19.0	2.8	20.1
N	S	13	3:08	8:25	15:32	20:43
			1.5	20.1	1.6	21.0
●	S	14	4:04	9:22	16:28	21:37
			0.1	21.0	0.6	21.6
P	M	15	4:57	10:14	17:22	22:28
			−1.0	21.5	−0.2	22.0
	Tu	16	5:50	11:07	18:13	23:18
			−1.7	21.7	−0.7	22.0
	W	17	6:40	11:56	19:00	. . .
			−2.1	21.7	−0.8	. . .
	Th	18	0:05	7:26	12:40	19:47
			21.8	−2.0	21.3	−0.3
E	F	19	0:48	8:12	13:20	20:33
			21.3	−1.1	20.6	0.7
	S	20	1:30	8:57	14:02	21:22
			20.3	0.2	19.6	2.1
☽	S	21	2:12	9:45	14:47	22:14
			19.0	2.0	18.3	3.6
	M	22	3:00	10:42	15:53	23:20
			17.5	3.6	17.1	4.7
	Tu	23	5:05	11:50	18:08	. . .
			16.6	4.9	16.7	. . .
	W	24	0:33	6:42	13:04	19:10
			5.0	16.2	4.9	17.1
	Th	25	1:38	7:42	14:05	20:03
			4.4	17.0	4.3	18.0
S	F	26	2:33	8:32	15:00	20:48
			3.3	17.6	3.4	18.9
	S	27	3:23	9:16	15:48	21:30
			2.3	18.9	2.7	19.6
	S	28	4:08	9:56	16:28	22:06
			1.6	19.5	2.2	20.0
○ A	M	29	4:48	10:33	17:10	22:38
			1.2	19.8	2.0	20.1
	Tu	30	5:25	11:03	17:48	22:57
			1.0	19.8	2.0	20.2
	W	31	6:00	11:18	18:17	23:16
			1.1	19.9	2.1	20.4

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	6:28	11:34	18:40	23:40
			1.1	20.1	2.2	20.7
E	F	2	6:50	11:57	19:00	. . .
			1.2	20.5	2.2	. . .
	S	3	0:10	7:12	12:28	19:24
			21.0	1.2	20.9	2.2
	S	4	0:42	7:37	13:08	19:53
			21.2	1.4	21.0	2.4
	M	5	1:18	8:10	13:42	20:32
			20.9	1.9	20.6	2.9
☾	Tu	6	2:03	8:52	14:28	21:20
			20.1	2.8	19.8	3.8
	W	7	2:56	9:47	15:25	22:25
			18.8	4.1	18.6	4.8
	Th	8	4:00	11:00	16:38	. . .
			17.6	5.1	17.7	. . .
N	F	9	0:12	5:26	13:00	18:08
			4.9	17.1	4.9	17.9
	S	10	1:52	7:22	14:28	19:48
			3.5	18.1	3.2	19.3
	S	11	2:57	8:42	15:24	20:55
			1.3	19.9	1.3	20.9
P	M	12	3:52	9:35	16:18	21:45
●			−0.6	21.3	−0.3	22.1
	Tu	13	4:42	10:20	17:08	22:30
			−2.1	22.3	−1.4	22.8
	W	14	5:32	11:04	17:53	23:14
			−3.0	22.8	−2.0	23.1
E	Th	15	6:18	11:45	18:40	23:52
			−3.3	22.8	−2.0	22.9
	F	16	7:00	12:22	19:24	. . .
			−2.9	22.4	−1.3	. . .
	S	17	0:30	7:44	12:54	20:05
			22.2	−1.7	21.6	−0.1
	S	18	1:08	8:25	13:28	20:46
			21.1	0.0	20.4	1.6
☽	M	19	1:38	9:06	14:00	21:32
			19.6	2.1	19.0	3.6
	Tu	20	2:18	9:55	14:45	22:32
			17.8	4.3	17.3	5.3
	W	21	3:10	11:10	15:52	23:56
			15.9	6.0	15.6	6.2
S	Th	22	6:17	12:35	18:48	. . .
			15.1	6.4	15.8	. . .
	F	23	1:13	7:28	13:45	19:48
			5.6	16.0	5.5	17.0
	S	24	2:14	8:20	14:40	20:36
			4.3	17.5	4.2	18.4
A	S	25	3:08	9:03	15:25	21:18
			2.8	18.9	2.9	19.6
	M	26	3:44	9:42	16:05	21:53
			1.7	19.9	2.0	20.3
○	Tu	27	4:23	10:17	16:42	22:28
			0.9	20.4	1.6	20.7
	W	28	4:58	10:42	17:17	22:38
			0.6	20.6	1.4	20.9
	Th	29	5:30	10:50	17:44	22:50
			0.5	20.7	1.4	21.1
E	F	30	5:55	11:02	18:08	23:12
			0.6	21.0	1.4	21.6
	S	31	6:17	11:28	18:28	23:40
			0.6	21.6	1.4	22.0

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	6:38	12:00	18:52	. . .
			0.7	22.0	1.3	. . .
	M	2	0:14	7:05	12:32	19:24
			22.1	1.0	22.1	1.7
	Tu	3	0:50	7:40	13:10	20:00
			21.7	1.7	21.6	2.4
☾	W	4	1:38	8:22	13:55	20:48
			20.7	2.9	20.3	3.7
	Th	5	2:23	9:15	14:50	21:56
			19.0	4.6	18.5	5.1
N	F	6	3:28	10:35	16:05	. . .
			17.1	6.0	17.0	. . .
	S	7	0:10	5:00	13:00	18:05
			5.4	16.2	5.5	16.9
	S	8	1:43	7:55	14:15	20:13
			3.4	18.0	3.1	19.2
P	M	9	2:45	8:47	15:10	21:00
			0.8	20.3	0.8	21.4
	Tu	10	3:35	9:28	16:00	21:40
			−1.4	22.1	−1.2	22.8
●	W	11	4:23	10:08	16:45	22:18
			−3.0	23.2	−2.3	23.6
E	Th	12	5:08	10:44	17:30	22:53
			−3.7	23.7	−2.7	23.8
	F	13	5:53	11:18	18:13	23:27
			−3.6	23.6	−2.5	23.4
	S	14	6:35	11:50	18:55	. . .
			−2.8	23.0	−1.5	. . .
	S	15	0:02	7:15	12:20	19:34
			22.5	−1.3	22.1	−0.1
	M	16	0:32	7:52	12:50	20:12
			21.3	0.6	20.8	1.7
	Tu	17	1:04	8:30	13:23	20:48
			19.8	2.7	19.3	3.6
☽ S	W	18	1:42	9:07	14:02	21:37
			17.9	4.8	17.4	5.4
	Th	19	2:28	10:20	14:53	23:15
			16.0	6.7	15.5	6.5
	F	20	3:40	12:03	18:28	. . .
			14.2	7.4	15.1	. . .
A	S	21	0:43	7:08	13:18	19:28
			6.4	15.7	6.3	16.5
	S	22	1:47	8:00	14:13	20:15
			4.9	17.4	4.7	18.2
	M	23	2:37	8:42	15:00	20:55
			3.2	19.0	3.1	19.7
	Tu	24	3:16	9:18	15:38	21:28
			1.8	20.2	2.0	20.6
	W	25	3:54	9:48	16:10	21:53
			0.8	20.9	1.3	21.1
E ○	Th	26	4:25	10:08	16:42	22:04
			0.4	21.2	1.0	21.4
	F	27	4:53	10:14	17:12	22:18
			0.3	21.4	0.9	21.7
	S	28	5:20	10:30	17:34	22:40
			0.4	21.9	0.9	22.1
	S	29	5:43	10:57	18:00	23:12
			0.5	22.3	0.9	22.4
	M	30	6:10	11:30	18:27	23:48
			0.7	22.5	1.0	22.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 11.3 feet (3.4 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	6:40	12:07	19:00	. . .
			1.2	22.4	1.5	. . .
	W	2	0:28	7:17	12:47	19:43
			21.7	2.1	21.6	2.5
N ☾	Th	3	1:10	8:02	13:32	20:39
			20.4	3.6	20.0	3.9
	F	4	2:02	9:00	14:28	21:48
			18.5	5.3	18.0	5.4
	S	5	3:07	10:51	15:43	. . .
			16.5	6.5	16.3	. . .
	S	6	0:10	6:48	12:52	19:15
			5.2	15.9	5.2	17.0
P	M	7	1:28	7:48	14:00	20:05
			3.0	18.4	2.7	19.5
	Tu	8	2:24	8:33	14:51	20:47
			0.4	20.8	0.3	21.7
E	W	9	3:15	9:10	15:38	21:28
			−1.7	22.6	−1.4	23.1
●	Th	10	4:00	9:46	16:21	21:57
			−2.9	23.6	−2.4	23.7
	F	11	4:44	10:17	17:05	22:30
			−3.2	23.9	−2.5	23.6
	S	12	5:25	10:48	17:43	23:00
			−2.8	23.6	−2.1	23.0
	S	13	6:07	11:19	18:28	23:34
			−1.8	22.9	−1.0	22.1
	M	14	6:47	11:49	19:07	. . .
			−0.3	21.9	0.3	. . .
	Tu	15	0:03	7:23	12:19	19:42
			20.9	1.4	20.7	1.9
S	W	16	0:36	8:00	12:53	20:17
			19.5	3.2	19.3	3.5
	Th	17	1:13	8:32	13:31	20:56
			18.0	5.0	17.7	5.1
☽	F	18	1:58	9:23	14:20	22:19
			16.3	6.6	15.9	6.5
A	S	19	2:55	11:16	17:41	23:58
			14.7	7.5	14.8	6.6
	S	20	6:34	12:33	18:55	. . .
			15.5	6.9	16.1	. . .
	M	21	1:07	7:28	13:37	19:45
			5.5	17.1	5.4	17.7
	Tu	22	1:58	8:10	14:22	20:24
			3.8	18.7	3.7	19.2
E	W	23	2:38	8:46	15:00	20:54
			2.4	20.0	2.4	20.3
	Th	24	3:15	9:12	15:34	21:15
			1.3	20.8	1.5	21.0
	F	25	3:46	9:27	16:07	21:27
			0.7	21.3	1.0	21.4
○	S	26	4:18	9:35	16:35	21:45
			0.5	21.8	0.8	21.8
	S	27	4:48	10:00	17:07	22:15
			0.5	22.2	0.7	22.1
	M	28	5:18	10:31	17:42	22:49
			0.8	22.5	0.8	22.1
	Tu	29	5:53	11:05	18:16	23:30
			1.2	22.4	1.1	21.8
N	W	30	6:30	11:45	18:56	. . .
			1.8	22.0	1.6	. . .
	Th	31	0:11	7:13	12:29	19:43
			21.1	2.8	21.0	2.6

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	1:00	8:03	13:18	20:40
			19.6	4.1	19.6	3.8
☾	S	2	1:45	9.11	14:13	22:12
			18.1	5.4	17.8	4.9
P	S	3	3:00	11:03	15:30	23:52
			16.4	6.0	16.2	4.4
	M	4	6:30	12:32	18:54	. . .
			16.5	4.8	17.3	. . .
E	Tu	5	1:05	7:29	13:37	19:47
			2.7	18.6	2.7	19.4
	W	6	2:01	8:11	14:28	20:26
			0.6	20.6	0.6	21.1
	Th	7	2:51	8:48	15:15	21:02
			−1.0	22.1	−0.9	22.3
	F	8	3:37	9:22	15:58	21:33
			−1.9	22.9	−1.6	22.7
●	S	9	4:19	9:52	16:41	22:05
			−2.0	23.1	−1.6	22.6
	S	10	5:08	10:20	17:23	22:35
			−1.4	22.8	−1.1	22.0
	M	11	5:45	10:49	18:05	23:06
			−0.4	22.2	−0.3	21.2
S	Tu	12	6:24	11:22	18:44	23:44
			0.8	21.4	0.8	20.3
	W	13	7:03	11:54	19:23	. . .
			2.1	20.4	2.0	. . .
	Th	14	0:15	7:40	12:30	19:55
			19.3	3.4	19.4	3.2
	F	15	0:52	8:11	13:08	20:30
			18.2	4.6	18.2	4.3
A ☽	S	16	1:34	8:48	13:53	21:12
			17.1	5.8	16.9	5.4
	S	17	2:24	9:58	14:49	22:36
			15.9	6.7	15.7	6.1
	M	18	3:46	11:27	18:01	. . .
			15.0	7.0	15.5	. . .
	Tu	19	0:00	6:48	12:41	19:00
			5.9	16.4	6.2	16.7
E	W	20	1:04	7:28	13:34	19:45
			4.9	17.7	4.8	18.0
	Th	21	1:51	8:05	14:17	20:13
			3.5	19.0	3.4	19.2
	F	22	2:31	8:30	14:54	20:33
			2.4	20.0	2.2	20.2
	S	23	3:08	8:41	15:33	20:51
			1.6	20.9	1.4	20.9
○	S	24	3:45	9:05	16:11	21:19
			1.1	21.6	0.9	21.4
	M	25	4:24	9:35	16:51	21:55
			1.0	22.0	0.6	21.6
N	Tu	26	5:08	10:12	17:34	22:34
			1.1	22.1	0.6	21.6
	W	27	5:53	10:52	18:23	23:18
			1.4	22.0	0.8	21.2
P	Th	28	6:39	11:40	19:10	. . .
			1.9	21.5	1.1	. . .
	F	29	0:04	7:30	12:22	20:00
			20.6	2.5	20.7	1.8
	S	30	0:51	8:22	13:10	20:55
			19.6	3.4	19.6	2.6

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	1:45	9:24	14:07	22:04
			18.3	4.3	18.2	3.4
	M	2	2:51	10:41	15:19	23:21
			17.0	4.8	16.9	3.6
E	Tu	3	5:52	12:00	18:18	. . .
			16.9	4.5	17.2	. . .
	W	4	0:33	6:55	13:07	19:16
			2.9	18.2	3.2	18.5
	Th	5	1:35	7:45	14:04	20:02
			1.8	19.6	1.8	19.8
	F	6	2:28	8:25	14:53	20:44
			0.7	20.8	0.5	20.7
	S	7	3:15	9:00	15:39	21:18
			0.0	21.5	−0.2	21.1
●	S	8	4:00	9:33	16:23	21:54
			−0.1	21.7	−0.3	21.1
S	M	9	4:43	10:04	17:06	22:25
			0.2	21.6	−0.1	20.8
	Tu	10	5:26	10:33	17:48	22:56
			0.8	21.2	0.3	20.3
	W	11	6:08	11:05	18:28	23:30
			1.5	20.7	0.9	19.8
	Th	12	6:47	11:40	19:05	. . .
			2.2	20.2	1.6	. . .
	F	13	0:03	7:24	12:14	19:38
			19.3	3.0	19.7	2.3
A	S	14	0:26	7:50	12:48	20:05
			18.8	3.7	19.1	3.0
	S	15	1:12	8:18	13:28	20:30
			18.3	4.4	19.4	3.7
☽	M	16	1:52	8:50	14:10	21:10
			17.6	5.1	17.6	4.4
E	Tu	17	2:40	9:36	15:02	22:02
			16.9	5.7	16.8	5.0
	W	18	3:38	10:40	16:08	23:10
			16.4	6.1	16.3	5.2
	Th	19	4:57	12:08	17:36	. . .
			16.5	5.7	16.6	. . .
	F	20	0:35	6:42	13:20	18:55
			4.7	17.5	4.7	17.7
	S	21	1:40	7:24	14:15	19:40
			3.7	18.7	3.3	18.9
	S	22	2:33	8:00	15:04	20:20
			2.7	19.9	2.0	20.0
	M	23	3:23	8:38	15:52	21:00
			1.9	20.8	1.1	20.7
N ○	Tu	24	4:14	9:20	16:43	21:47
			1.3	21.4	0.3	21.1
	W	25	5:05	10:03	17:32	22:30
			0.8	21.7	−0.2	21.2
P	Th	26	5:53	10:48	18:22	23:20
			0.7	21.8	−0.5	21.2
	F	27	6:44	11:35	19:10	. . .
			0.6	21.6	−0.5	. . .
	S	28	0:07	7:32	12:30	19:58
			20.9	0.9	21.2	−0.1
	S	29	0:53	8:20	13:08	20:47
			20.2	1.6	20.3	0.8
E ☾	M	30	1:40	9:12	13:57	21:40
			19.3	2.6	19.2	2.0
	Tu	31	2:34	10:12	14:53	22:45
			18.1	3.7	17.8	3.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the French Charts for this region, and which is 11.3 feet (3.4 meters) below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Paris Mean Civil, for the meridian 2° 20′ E.; 0h is midnight, 12h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	4:55 2.8	11:35 13.0	17:19 2.8	23:58 13.9
	Tu	2	5:57 2.2	12:30 13.9	18:20 1.6	. . . . .
	W	3	0:55 14.8	6:54 1.6	13:18 14.9	19:14 0.5
N ☽ P	Th	4	1:47 15.5	7:42 1.1	14:08 15.6	20:02 −0.4
	F	5	2:37 16.0	8:29 0.8	14:47 16.1	20:51 −1.0
	S	6	3:25 16.2	9:15 0.8	15:32 16.3	21:40 −1.2
	S	7	4:12 16.0	9:59 1.0	16:16 16.1	22:28 −1.0
	M	8	5:02 15.4	10:42 1.5	17:08 15.8	23:18 −0.4
	Tu	9	5:52 14.6	11:28 2.1	17:53 15.1	. . . . .
E	W	10	0:10 0.5	6:46 13.7	12:16 2.9	18:48 14.3
☾	Th	11	1:06 1.5	7:46 12.8	13:10 3.7	19:52 13.5
	F	12	2:08 2.7	8:52 12.2	14:17 4.4	21:05 13.0
	S	13	3:20 3.6	10:00 12.0	15:36 4.6	22:19 12.8
	S	14	4:32 4.0	11:05 12.1	16:52 4.3	23:28 13.0
	M	15	5:38 4.0	12:00 12.6	17:55 3.7	. . . . .
	Tu	16	0:28 13.2	6:34 3.8	12:47 13.1	18:45 3.1
S	W	17	1:18 13.6	7:17 3.5	13:28 13.7	19:28 2.4
A	Th	18	2:01 13.8	7:52 3.3	14:05 14.1	20:05 1.8
●	F	19	2:38 13.9	8:22 3.1	14:37 14.3	20:37 1.4
	S	20	3:10 13.9	8:45 3.0	15:07 14.5	21:08 1.1
	S	21	3:38 13.8	9:10 2.6	15:34 14.5	21:38 0.8
	M	22	4:04 13.8	9:35 2.2	16:00 14.6	22:10 0.5
	Tu	23	4:29 13.8	10:08 2.0	16:30 14.6	22:45 0.5
E	W	24	4:58 13.7	10:43 1.9	17:08 14.5	23:22 0.7
	Th	25	5:32 13.5	11:22 2.1	17:42 14.2	. . . . .
	F	26	0:04 1.3	6:13 13.1	12:07 2.5	18:28 13.6
☽	S	27	0:51 2.0	7:08 12.5	12:59 3.0	19:27 12.9
	S	28	1:47 2.8	8:07 11.8	14:02 3.5	20:45 12.3
	M	29	2:56 3.7	9:37 11.4	15:24 3.8	22:22 12.2
	Tu	30	4:28 4.0	11:07 12.1	16:54 3.3	23:47 13.1
N	W	31	5:45 3.5	12:13 13.3	18:07 2.2	. . . . .

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:50 14.2	6:48 2.6	13:07 14.6	19:06 0.7
P	F	2	1:43 15.3	7:40 1.7	13:55 15.8	19:58 −0.5
○	S	3	2:32 16.0	8:28 1.0	14:38 16.7	20:45 −1.4
	S	4	3:17 16.5	9:05 0.5	15:22 17.2	21:30 −1.8
	M	5	3:59 16.5	9:45 0.4	16:08 17.2	22:13 −1.7
E	Tu	6	4:40 16.1	10:22 0.6	16:45 16.8	22:57 −1.0
	W	7	5:21 15.2	11:00 1.1	17:27 16.0	23:40 0.1
	Th	8	6:04 14.1	11:40 1.9	18:14 14.8	. . . . .
	F	9	0:25 1.5	6:50 12.9	12:22 2.8	19:07 13.4
☾	S	10	1:14 3.0	7:45 11.7	13:12 3.9	20:17 12.3
	S	11	2:15 4.5	9:00 11.0	14:25 4.8	21:45 11.7
	M	12	3:47 5.4	10:22 11.1	16:08 5.1	23:07 11.7
S	Tu	13	5:16 5.4	11:32 11.7	17:30 4.5	. . . . .
A	W	14	0:18 12.1	6:20 4.4	12:25 12.5	18:29 3.6
	Th	15	1:05 12.8	7:05 4.2	13:10 13.4	19:13 2.7
	F	16	1:46 13.4	7:40 3.6	13:47 14.2	19:50 1.8
	S	17	2:21 14.0	8:07 3.0	14:20 14.8	20:20 1.1
●	S	18	2:50 14.3	8:30 2.4	14:48 15.2	20:50 0.5
	M	19	3:17 14.5	8:55 1.8	15:16 15.4	21:18 0.0
	Tu	20	3:40 14.7	9:21 1.3	15:42 15.6	21:47 −0.3
E	W	21	4:04 14.8	9:47 0.8	16:10 15.6	22:19 −0.3
	Th	22	4:31 14.8	10:21 0.8	16:41 15.5	22:54 0.0
	F	23	5:02 14.5	10:59 1.0	17:19 15.0	23:32 0.8
	S	24	5:38 13.8	11:40 1.6	18:01 14.2	. . . . .
☽	S	25	0:15 1.8	6:22 13.0	12:29 2.4	18:57 13.1
	M	26	1:08 3.1	7:20 11.9	13:30 3.3	20:15 11.9
N	Tu	27	2:17 4.3	8:55 11.0	14:56 4.0	22:17 11.6
	W	28	4:07 5.0	10:50 11.7	16:42 3.6	23:45 12.7
	Th	29	5:44 4.2	12:02 13.2	18:02 2.2	. . . . .

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	0:47 14.1	6:44 2.9	12:51 14.8	18:58 0.6
	S	2	1:37 15.3	7:31 1.7	13:41 16.2	19:47 −0.8
○	S	3	2:20 16.3	8:12 0.7	14:24 17.2	20:31 −1.7
E	M	4	3:00 16.8	8:47 0.1	15:04 17.8	21:12 −1.9
	Tu	5	3:38 16.7	9:22 −0.1	15:43 17.7	21:51 −1.7
	W	6	4:13 16.3	9:57 0.0	16:21 17.1	22:28 −0.8
	Th	7	4:47 15.3	10:30 0.5	17:00 16.1	23:05 0.4
	F	8	5:21 14.3	11:05 1.3	17:42 14.8	23:41 1.8
	S	9	5:55 13.0	11:43 2.2	18:27 13.3	. . . . .
☾	S	10	0:20 3.4	6:33 11.8	12:28 3.4	19:28 11.8
S	M	11	1:02 4.8	7:30 10.6	13:26 4.4	21:08 10.8
	Tu	12	2:12 6.2	9:30 10.3	15:40 5.4	22:45 10.9
A	W	13	4:43 6.3	10:55 11.1	16:58 4.9	23:52 11.4
	Th	14	5:55 5.5	11:55 12.2	18:00 3.9	. . . . .
	F	15	0:42 12.3	6:38 4.4	12:40 13.2	18:45 2.8
	S	16	1:20 13.3	7:12 3.5	13:18 14.2	19:22 1.7
	S	17	1:58 14.1	7:40 2.7	13:52 15.1	19:52 0.8
●	M	18	2:20 14.7	8:03 1.9	14:22 15.6	20:20 0.0
E	Tu	19	2:46 15.1	8:28 1.1	14:50 16.0	20:50 −0.4
	W	20	3:41 15.4	8:55 0.4	15:17 16.2	21:20 −0.6
	Th	21	3:37 15.5	9:25 0.0	15:48 16.2	21:52 −0.5
	F	22	4:05 15.3	10:00 0.0	16:22 15.9	22:27 0.0
	S	23	4:37 14.9	10:38 0.4	17:00 15.0	23:06 0.9
	S	24	5:12 14.1	11:20 1.1	17:45 14.1	23:48 2.2
	M	25	5:56 13.0	12:10 2.1	18:42 12.8	. . . . .
N ☽	Tu	26	0:41 8.6	6:55 11.8	13:15 3.1	20:15 11.5
	W	27	1:56 5.0	8:40 10.9	14:52 4.0	22:22 11.7
P	Th	28	4:10 5.4	10:36 12.0	16:38 3.3	23:38 12.9
	F	29	5:37 4.3	11:45 13.6	17:50 1.8	. . . . .
	S	30	0:35 14.2	6:30 2.9	12:37 15.2	18:44 0.4
	S	31	1:20 15.4	7:13 1.6	13:22 16.5	19:30 −0.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	2:00 16.2	7:50 0.7	14:03 17.3	20:10 −1.3
	Tu	2	2:37 16.5	8:24 0.1	14:48 17.6	20:50 −1.3
	W	3	3:11 16.4	8:58 −0.1	15:21 17.4	21:26 −0.9
	Th	4	3:43 15.9	9:30 0.0	16:00 16.6	22:00 0.0
	F	5	4:14 15.1	10:02 0.4	16:35 15.6	22:30 1.1
	S	6	4:42 14.1	10:37 1.1	17:13 14.3	23:00 2.4
	S	7	5:12 13.1	11:14 2.0	17:53 12.9	23:31 3.6
S	M	8	5:43 12.0	11:57 3.1	18:45 11.4	. . . . . .
☾	Tu	9	0:08 4.8	6:25 11.0	12:52 4.2	20:25 10.4
A	W	10	0:59 5.9	7:50 10.0	14:17 5.0	22:08 10.5
	Th	11	3:11 6.7	10:17 10.9	16:09 4.9	23:15 11.1
	F	12	5:05 5.9	11:12 11.9	17:16 4.0	. . . . . .
	S	13	0:04 12.1	5:53 4.8	12:00 13.0	18:08 2.9
	S	14	0:41 13.1	6:28 3.7	12:41 14.1	18:41 1.8
E	M	15	1:13 14.0	6:58 2.6	13:16 15.0	19:15 0.8
	Tu	16	1:43 14.8	7:27 1.6	13:48 15.6	19:47 0.1
●	W	17	2:12 15.3	7:57 0.7	14:20 16.1	20:20 −0.3
	Th	18	2:40 15.6	8:30 0.0	14:53 16.3	20:58 −0.5
	F	19	3:11 15.7	9:03 −0.3	15:28 16.2	21:28 −0.2
	S	20	3:43 15.4	9:41 −0.3	16:06 15.8	22:05 0.5
	S	21	4:18 14.9	10:23 0.2	16:50 14.9	22:46 1.5
N P	M	22	4:58 14.0	11:10 0.9	17:40 13.8	23:32 2.8
	Tu	23	5:47 12.9	12:05 2.0	18:50 12.5	. . . . . .
☽	W	24	0:30 4.1	6:57 11.8	13:18 3.0	20:35 11.7
	Th	25	1:56 5.3	8:41 11.5	14:55 3.4	22:10 12.1
	F	26	3:58 5.2	10:13 12.6	16:24 2.7	23:20 13.1
	S	27	5:13 4.1	11:19 14.1	17:30 1.6	. . . . . .
E	S	28	0:12 14.2	6:05 2.9	12:12 15.2	18:23 0.6
	M	29	0:56 15.1	6:47 1.8	12:59 16.1	19:08 0.0
	Tu	30	1:35 15.6	7:24 1.0	13:41 16.7	19:48 −0.3
MAY.						
○	W	1	2:12 15.7	8:00 0.6	14:22 16.8	20:25 0.0
	Th	2	2:45 15.6	8:32 0.4	15:00 16.3	21:00 0.5
	F	3	3:16 15.1	9:07 0.5	15:38 15.6	21:30 1.3
	S	4	3:45 14.5	9:40 0.8	16:15 14.7	21:58 2.2
S	S	5	4:13 13.7	10:15 1.3	16:52 13.5	22:25 3.0
	M	6	4:41 13.0	10:53 2.0	17:30 12.4	22:57 3.8
A	Tu	7	5:13 12.3	11:37 2.8	18:17 11.4	23:34 4.6
	W	8	5:57 11.5	12:30 3.6	19:34 10.6	. . . . . .
☾	Th	9	0:24 5.4	7:05 10.8	13:37 4.2	21:07 10.4
	F	10	1:35 5.9	8:53 10.8	15:00 4.4	22:18 11.0
	S	11	3:27 5.9	10:13 11.7	16:13 3.8	23:10 11.8
	S	12	4:41 5.0	11:08 12.7	17:07 3.0	23:52 12.8
E	M	13	5:30 3.9	11:55 13.6	17:53 2.0	. . . . . .
	Tu	14	0:30 13.7	6:10 2.7	12:35 14.5	18:38 1.2
	W	15	1:04 14.5	6:49 1.6	13:15 15.2	19:13 0.5
●	Th	16	1:39 15.1	7:27 0.6	13:53 15.8	19:50 0.2
	F	17	2:13 15.4	8:06 0.0	14:33 16.0	20:30 0.1
	S	18	2:49 15.5	8:47 −0.3	15:15 15.9	21:10 0.5
N P	S	19	3:28 15.3	9:30 −0.3	16:00 15.4	21:51 1.1
	M	20	4:08 14.8	10:17 0.0	16:49 14.6	22:30 2.0
	Tu	21	4:54 14.1	11:10 0.7	17:48 13.7	23:27 3.0
	W	22	5:50 13.3	12:10 1.51	19:01 2.8	. . . . . .
☽	Th	23	0:29 4.1	7:00 12.7	13:20 2.2	20:25 12.4
	F	24	0:52 4.8	8:24 12.7	14:41 2.5	21:42 12.6
E	S	25	3:23 4.7	9:43 13.3	15:56 2.2	22:48 13.1
	S	26	4:34 4.0	10:48 14.1	17:02 1.8	23:42 13.8
	M	27	5:30 3.1	11:40 14.8	17:57 1.4	. . . . . .
	Tu	28	0:28 14.3	6:16 2.3	12:36 15.4	18:45 1.2
	W	29	1:10 14.7	6:59 1.7	13:22 15.6	19:27 1.2
○	Th	30	1:47 14.9	7:38 1.3	14:05 15.6	20:05 1.4
	F	31	2:22 14.8	8:14 1.1	14:47 15.1	20.38 1.9
JUNE.						
S	S	1	2:56 14.5	8:50 1.1	15:25 14.5	21:07 2.5
	S	2	3:27 14.1	9:25 1.3	16:02 13.8	21:33 3.0
	M	3	3:55 13.5	10:01 1.6	16:38 13.0	22:00 3.4
A	Tu	4	4:25 13.1	10:40 2.0	17:14 12.3	22:30 3.8
	W	5	5:00 12.7	11:21 2.4	17:53 11.8	23:12 4.1
	Th	6	5:41 12.3	12:07 2.8	18:42 11.3	23:58 4.5
	F	7	6:33 11.9	13:00 3.2	19:45 11.0	. . . . . .
☾	S	8	0:55 4.8	7:38 11.7	14:00 3.5	20:55 11.1
E	S	9	2:02 4.8	8:50 11.8	15:08 3.5	21:59 11.5
	M	10	3:13 4.5	10:00 12.3	16:04 3.1	22:53 12.2
	Tu	11	4:23 3.9	11:02 13.0	17:02 2.5	23:42 13.0
	W	12	5:22 2.9	11:56 13.8	17:53 1.9	. . . . . .
	Th	13	0:27 13.9	6:14 1.9	12:45 14.6	18:43 1.3
	F	14	1:10 14.6	7:01 0.9	13:33 15.2	19:30 1.0
● N	S	15	1:54 15.1	7:50 0.1	14:20 15.6	20:13 0.9
P	S	16	2:35 15.4	8:36 −0.4	15:08 15.7	20:59 1.0
	M	17	3:20 15.4	9:25 −0.5	15:58 15.4	21:45 1.3
	Tu	18	4:05 15.3	10:15 −0.4	16:50 15.0	22:32 1.9
	W	19	4:58 14.9	11:08 0.0	17:47 14.3	23:23 2.6
	Th	20	5:47 14.4	12:05 0.6	18:48 13.6	. . . . . .
☽	F	21	0:20 3.3	6:48 13.9	13:07 1.4	19:55 13.0
E	S	22	1:24 3.9	7:55 13.6	14:14 2.0	21:02 12.7
	S	23	2:34 4.2	9:07 13.6	15:24 2.5	22:08 12.8
	M	24	3:47 4.1	10:15 13.7	16:30 2.7	23:08 13.0
	Tu	25	4:52 3.7	11:19 14.0	17:31 2.7	. . . . . .
	W	26	0:00 13.4	5:48 3.1	12:17 14.2	18:25 2.7
	Th	27	0:46 13.8	6:38 2.5	13:08 14.4	19:12 2.7
	F	28	1:27 14.1	7:23 2.1	13:55 14.4	19:50 2.8
S ○	S	29	2:06 14.3	8:08 1.7	14:37 14.3	20:25 3.0
	S	30	2:40 14.2	8:40 1.5	15:15 13.9	20:55 3.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings given on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	JULY.					
	M	1	3:13	9:15	15:52	21:19
			14.1	1.5	13.5	3.2
A	Tu	2	3:44	9:50	16:22	21:45
			13.8	1.5	13.1	3.2
	W	3	4:13	10:23	16:52	22:15
			13.6	1.6	12.7	3.2
	Th	4	4:43	11:00	17:20	22:51
			13.5	1.7	12.5	3.2
	F	5	5:18	11:38	17:57	23:32
			13.4	1.8	12.4	3.3
E	S	6	6:00	12:21	18:38	. . .
			13.1	2.1	12.2	. . .
☾	S	7	0:19	6:46	13:08	19:30
			3.5	12.8	2.5	11.9
	M	8	1:12	7:44	14:03	20:33
			3.6	12.5	2.9	11.7
	Tu	9	2:15	8:52	15:07	21:47
			3.8	12.4	3.2	11.8
	W	10	3:25	10:10	16:14	22:57
			3.7	12.5	3.2	12.3
	Th	11	4:39	11:21	17:21	23:58
			3.2	13.1	2.9	13.1
	F	12	5:47	12:27	18:28	. . .
			2.3	13.9	2.4	. . .
N	S	13	0:51	6:47	13:22	19:17
			14.1	1.2	14.8	1.8
●	S	14	1:40	7:39	14:15	20:05
			15.0	0.2	15.4	1.3
P	M	15	2:26	8:29	15:08	20:54
			15.7	—0.6	15.8	1.0
	Tu	16	3:12	9:18	15:52	21:38
			16.1	—1.1	15.9	1.0
	W	17	3:57	10:07	16:39	22:22
			16.3	—1.2	15.6	1.2
	Th	18	4:42	10:55	17:27	23:07
			16.1	—0.9	15.1	1.6
E	F	19	5:30	11:46	18:18	23:52
			15.6	—0.1	14.3	2.2
	S	20	6:22	12:38	19:14	. . .
			15.0	0.9	13.4	. . .
☽	S	21	0:43	7:21	13:36	20:15
			3.0	14.1	2.1	12.5
	M	22	1:42	8:29	14:43	21:23
			3.7	13.3	3.2	12.1
	Tu	23	2:53	9:45	15:57	22:30
			4.3	13.0	3.8	12.1
	W	24	4:14	10:58	17:09	23:32
			4.3	12.9	4.1	12.4
	Th	25	5:25	12:03	18:12	. . .
			3.8	13.2	4.0	. . .
S	F	26	0:25	6:24	12:59	19:02
			13.0	3.2	13.5	3.7
	S	27	1:10	7:12	13:47	19:42
			13.6	2.5	13.7	3.4
	S	28	1:50	7:53	14:28	20:14
			14.1	1.9	13.9	3.2
○ A	M	29	2:27	8:29	15:02	20:40
			14.5	1.5	13.9	3.1
	Tu	30	2:59	9:00	15:32	21:05
			14.6	1.2	13.8	2.8
	W	31	3:28	9:30	15:59	21:27
			14.6	1.0	13.7	2.5
	AUGUST.					
	Th	1	3:58	10:00	16:21	21:55
			14.6	0.8	13.6	2.2
E	F	2	4:22	10:31	16:45	22:27
			14.5	0.8	13.6	2.0
	S	3	4:50	11:04	17:15	23:05
			14.4	0.9	13.5	2.0
	S	4	5:26	11:43	17:51	23:45
			14.2	1.3	13.2	2.3
	M	5	6:08	12:25	18:35	. . .
			13.7	1.9	12.7	. . .
☾	Tu	6	0:33	7:00	13:16	19:28
			2.7	13.1	2.7	12.1
	W	7	1:31	8:05	14:17	20:45
			3.2	12.4	3.3	11.5
	Th	8	2:43	9:37	15:35	22:23
			3.6	12.0	4.1	11.6
N	F	9	4:11	11:11	17:04	23:40
			3.6	12.5	4.0	12.7
	S	10	5:32	12:22	18:16	. . .
			2.6	13.5	3.1	. . .
	S	11	0:39	6:37	13:18	19:11
			14.0	1.3	14.7	2.1
P ●	M	12	1:29	7:30	14:07	19:58
			15.3	—0.1	15.6	1.2
	Tu	13	2:15	8:20	14:58	20:40
			16.4	—1.1	16.3	0.6
	W	14	2:57	9:05	15:35	21:22
			17.1	—1.8	16.5	0.3
E	Th	15	3:40	9:49	16:17	22:00
			17.4	—1.8	16.3	0.3
	F	16	4:22	10:33	16:58	22:39
			17.1	—1.3	15.6	0.6
	S	17	5:05	11:17	17:40	23:20
			16.4	—0.4	14.7	1.3
	S	18	5:52	12:02	18:25	. . .
			15.3	1.0	13.5	. . .
☽	M	19	0:02	6:45	12:52	19:18
			2.3	14.1	2.5	12.3
	Tu	20	0:53	7:51	13:52	20:30
			3.3	12.8	4.1	11.3
	W	21	2:00	9:16	15:20	21:53
			4.3	12.0	5.1	11.3
S	Th	22	3:38	10:41	16:52	23:05
			4.8	11.9	5.3	11.8
	F	23	5:07	11:52	18:00	. . .
			4.3	12.3	4.8	. . .
	S	24	0:08	6:10	12:47	18:50
			12.5	3.5	12.8	4.2
A	S	25	0:50	6:57	13:31	19:27
			13.5	2.6	13.5	3.5
	M	26	1:32	7:35	14:07	19:55
			14.3	1.8	14.0	3.0
○	Tu	27	2:05	8:08	14:38	20:20
			14.9	1.2	14.3	2.5
	W	28	2:37	8:37	15:03	20:41
			15.2	0.7	14.4	2.0
	Th	29	3:03	9:03	15:27	21:02
			15.4	0.4	14.5	1.5
E	F	30	3:28	9:30	15:48	21:30
			15.4	0.1	14.6	1.1
	S	31	3:54	9:58	16:11	22:01
			15.4	0.1	14.6	1.1
	SEPTEMBER.					
	S	1	4:23	10:32	16:40	22:37
			15.3	0.3	14.3	1.0
	M	2	4:58	11:08	17:13	23:17
			14.9	0.9	13.9	1.5
	Tu	3	5:37	11:48	17:54	. . .
			14.2	1.8	13.1	. . .
☾	W	4	0:03	6:27	12:37	18:46
			2.2	13.2	3.0	12.2
	Th	5	1:00	7:36	13:40	20:03
			3.0	12.1	4.1	11.2
N	F	6	2:18	9:31	15:12	22:07
			3.8	11.4	5.0	11.3
	S	7	4:01	11:13	17:05	23:30
			3.8	12.3	4.6	12.7
	S	8	5:37	12:18	18:13	. . .
			2.5	13.6	3.3	. . .
P	M	9	0:27	6:30	13:09	19:02
			14.3	1.0	14.9	2.0
	Tu	10	1:14	7:19	13:58	19:44
			15.8	—0.5	16.0	0.9
●	W	11	1:58	8:04	14:34	20:22
			17.0	—1.5	16.6	0.1
E	Th	12	2:38	8:46	15:12	20:58
			17.7	—2.0	16.8	—0.3
	F	13	3:18	9:27	15:48	21:34
			17.8	—1.8	16.5	—0.3
	S	14	3:58	10:06	16:25	22:10
			17.4	—1.1	15.7	0.1
	S	15	4:39	10:44	17:00	22:47
			16.5	0.0	14.7	0.8
	M	16	5:23	11:22	17:37	23:28
			15.2	1.5	13.4	1.9
	Tu	17	6:12	12:03	18:20	. . .
			13.7	3.1	12.1	. . .
☽ S	W	18	0:15	7:17	12:51	19:23
			3.1	12.2	4.7	10.8
	Th	19	1:16	8:52	14:20	21:10
			4.3	11.2	6.1	10.7
	F	20	3:03	10:26	16:29	22:31
			5.0	11.2	6.1	11.4
A	S	21	4:43	11:35	17:40	23:37
			4.6	11.6	5.3	12.4
	S	22	5:47	12:26	18:25	. . .
			3.6	12.4	4.4	. . .
	M	23	0:24	6:32	13:05	18:58
			13.4	2.7	13.3	3.5
	Tu	24	1:08	7:08	13:38	19:25
			14.3	1.7	14.1	2.7
	W	25	1:37	7:37	14:05	19:48
			15.1	1.0	14.6	2.0
E ○	Th	26	2:07	8:05	14:30	20:12
			15.5	0.4	14.9	1.3
	F	27	2:35	8:32	14:53	20:37
			15.8	0.0	15.1	0.7
	S	28	3:00	9:00	15:16	21:03
			15.9	—0.2	15.2	0.3
	S	29	3:27	9:28	15:41	21:37
			15.9	—0.2	15.1	0.2
	M	30	3:59	10:02	16:11	22:13
			15.6	0.2	14.8	0.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.), and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	2:00	7:50	14:08	20:10
			16.2	0.7	17.3	—1.3
	Tu	2	2:37	8:24	14:48	20:50
			16.5	0.1	17.6	—1.3
	W	3	3:11	8:58	15:21	21:26
			16.4	—0.1	17.4	—0.9
	Th	4	3:43	9:30	16:00	22:00
			15.9	0.0	16.6	0.0
	F	5	4:14	10:02	16:35	22:30
			15.1	0.4	15.6	1.1
	S	6	4:42	10:37	17:13	23:00
			14.1	1.1	14.3	2.4
	S	7	5:12	11:14	17:58	23:31
			13.1	2.0	12.9	3.6
S	M	8	5:43	11:57	18:45	. . .
			12.0	3.1	11.4	. . .
☾	Tu	9	0:08	6:25	12:52	20:25
			4.8	11.0	4.2	10.4
A	W	10	0:59	7:50	14:17	22:08
			5.9	10.0	5.0	10.5
	Th	11	3:11	10:17	16:09	23:15
			6.7	10.9	4.9	11.1
	F	12	5:05	11:12	17:16	. . .
			5.9	11.9	4.0	. . .
	S	13	0:04	5:53	12:00	18:08
			12.1	4.8	13.0	2.9
	S	14	0:41	6:28	12:41	18:41
			13.1	3.7	14.1	1.8
E	M	15	1:13	6:58	13:16	19:15
			14.0	2.6	15.0	0.8
	Tu	16	1:43	7:27	13:48	19:47
			14.8	1.6	15.6	0.1
●	W	17	2:12	7:57	14:20	20:20
			15.3	0.7	16.1	—0.3
	Th	18	2:40	8:30	14:58	20:58
			15.6	0.0	16.3	—0.5
	F	19	3:11	9:03	15:28	21:28
			15.7	—0.3	16.2	—0.2
	S	20	3:43	9:41	16:06	22:05
			15.4	—0.3	15.8	0.5
	S	21	4:18	10:23	16:50	22:46
			14.9	0.2	14.9	1.5
N P	M	22	4:58	11:10	17:40	23:32
			14.0	0.9	13:3	2.8
	Tu	23	5:47	12:05	18:50	. . .
			12.9	2.0	12.5	. . .
☽	W	24	0:30	6:57	13:18	20:35
			4.1	11.8	3.0	11.7
	Th	25	1:56	8:41	14:55	22:10
			5.3	11.5	3.4	12.1
	F	26	3:58	10:13	16:24	23:20
			5.2	12.6	2.7	13.1
	S	27	5:13	11:19	17:30	. . .
			4.1	14.1	1.6	. . .
E	S	28	0:12	6:05	12:12	18:23
			14.2	2.9	15.2	0.6
	M	29	0:56	6:47	12:59	19:08
			15.1	1.8	16.1	0.0
	Tu	30	1:35	7:24	13:41	19:48
			15.6	1.0	16.7	—0.3

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	2:12	8:00	14:22	20:25
			15.7	0.6	16.8	0.0
	Th	2	2:45	8:32	15:00	21:00
			15.6	0.4	16:3	0.5
	F	3	3:16	9:07	15:38	21:30
			15.1	0.5	15.6	1.3
	S	4	3:45	9:40	16:15	21:58
			14.5	0.8	14.7	2.2
S	S	5	4:13	10:15	16:52	22:25
			13.7	1.3	13.5	3.0
	M	6	4:41	10:58	17:30	22:57
			13.0	2.0	12.4	3.8
A	Tu	7	5:13	11:37	18:17	23:34
			12.3	2.8	11.4	4.6
	W	8	5:57	12:30	19:34	. . .
			11.5	3.6	10.6	. . .
☾	Th	9	0:24	7:05	13:37	21:07
			5.4	10.8	4.2	10.4
	F	10	1:35	8:53	15:00	22:18
			5.9	10.8	4.4	11.0
	S	11	3:27	10:13	16:13	23:10
			5.9	11.7	3.8	11.8
	S	12	4:41	11:08	17:07	23:52
			5.0	12.7	3.0	12.8
E	M	13	5:30	11:55	17:53	. . .
			3.9	13.6	2.0	. . .
	Tu	14	0:30	6:10	12:35	18:38
			13.7	2.7	14.5	1.2
	W	15	1:04	6:49	13:15	19:13
			14.5	1.6	15.2	0.5
●	Th	16	1:39	7:27	13:58	19:50
			15.1	0.6	15.8	0.2
	F	17	2:13	8:06	14:38	20:30
			15.4	0.0	16.0	0.1
	S	18	2:49	8:47	15:15	21:10
			15.5	—0.3	15.9	0.5
N P	S	19	3:28	9:30	16:00	21:51
			15.3	—0.3	15.4	1.1
	M	20	4:08	10:17	16:49	22:30
			14.8	0.0	14.6	2.0
	Tu	21	4:54	11:10	17:48	23:27
			14.1	0.7	13.7	3.0
	W	22	5:50	12:10	19:01	. . .
			13.3	1.51	2.8	. . .
☽	Th	23	0:29	7:00	13:20	20:25
			4.1	12.7	2.2	12.4
	F	24	0:52	8:24	14:41	21:42
			4.8	12.7	2.5	12.6
E	S	25	3:23	9:43	15:58	22:48
			4.7	13.3	2.2	13.1
	S	26	4:34	10:48	17:02	23:42
			4.0	14.1	1.8	13.8
	M	27	5:30	11:40	17:57	. . .
			3.1	14.8	1.4	. . .
	Tu	28	0:28	6:16	12:36	18:45
			14.3	2.3	15.4	1.2
	W	29	1:10	6:59	13:22	19:27
			14.7	1.7	15.6	1.2
○	Th	30	1:47	7:38	14:05	20:05
			14.9	1.3	15.6	1.4
	F	31	2:22	8:14	14:47	20.38
			14.8	1.1	15.1	1.9

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	2:56	8:50	15:25	21:07
			14.5	1.1	14.5	2.5
	S	2	3:27	9:25	16:02	21:33
			14.1	1.3	13.8	3.0
	M	3	3:55	10:01	16:38	22:00
			13.5	1.6	13.0	3.4
A	Tu	4	4:25	10:40	17:14	22:30
			13.1	2.0	12.3	3.8
	W	5	5:00	11:21	17:58	23:12
			12.7	2.4	11.8	4.1
	Th	6	5:41	12:07	18:42	23:58
			12.3	2.8	11.3	4.5
	F	7	6:33	13:00	19:45	. . .
			11.9	3.2	11.0	. . .
☾	S	8	0:55	7:38	14:00	20:55
			4.8	11.7	3.5	11.1
E	S	9	2:02	8:50	15:08	21:59
			4.8	11.8	3.5	11.5
	M	10	3:13	10:00	16:04	22:53
			4.5	12.3	3.1	12.2
	Tu	11	4:23	11:02	17:02	23:42
			3.9	13.0	2.5	13.0
	W	12	5:22	11:56	17:53	. . .
			2.9	13.8	1.9	. . .
	Th	13	0:27	6:14	12:45	18:43
			13.9	1.9	14.6	1.3
	F	14	1:10	7:01	13:33	19:30
			14.6	0.9	15.2	1.0
● N	S	15	1:54	7:50	14:20	20:13
			15.1	0.1	15.6	0.9
P	S	16	2:35	8:36	15:08	20:59
			15.4	—0.4	15.7	1.0
	M	17	3:20	9:25	15:58	21:45
			15.4	—0.5	15.4	1.3
	Tu	18	4:05	10:15	16:50	22:32
			15.3	—0.4	15.0	1.9
	W	19	4:58	11:08	17:47	23:23
			14.9	0.0	14.3	2.6
	Th	20	5:47	12:05	18:48	. . .
			14.4	0.6	13.6	. . .
☽	F	21	0:20	6:48	13:07	19:55
			3.3	13.9	1.4	13.0
E	S	22	1:24	7:55	14:14	21:02
			3.9	13.6	2.0	12.7
	S	23	2:34	9:07	15:24	22:08
			4.2	13.6	2.5	12.8
	M	24	3:47	10:15	16:30	23:08
			4.1	13.7	2.7	13.0
	Tu	25	4:52	11:19	17:31	. . .
			3.7	14.0	2.7	. . .
	W	26	0:00	5:48	12:17	18:25
			13.4	3.1	14.2	2.7
	Th	27	0:46	6:38	13:08	19:12
			13.8	2.5	14.4	2.7
	F	28	1:27	7:28	13:55	19:50
			14.1	2.1	14.4	2.8
S ○	S	29	2:06	8:03	14:37	20:25
			14.3	1.7	14.3	3.0
	S	30	2:40	8:40	15:15	20:55
			14.2	1.5	13.9	3.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings given on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:43 16.9	9:24 2.3	15:27 17.5	22:01 3.0
	Tu	2	3:52 17.4	10:28 1.7	16:28 18.3	23:00 1.8
	W	3	4:55 18.1	11:24 1.0	17:23 19.0	23:55 0.7
N ○ P	Th	4	5:51 18.9	12:17 0.6	18:14 19.6	. . . . .
	F	5	0:45 —0.2	6:43 19.3	13:06 0.5	19:01 20.1
	S	6	1:31 —0.7	7:32 19.5	13:52 0.6	19:47 20.3
	S	7	2:18 —0.9	8:20 19.4	14:39 1.0	20:32 20.2
	M	8	3:08 —0.8	9:06 19.0	15:24 1.7	21:16 19.7
	Tu	9	3:50 —0.4	9:54 18.4	16:12 2.4	22:02 19.1
E	W	10	4:40 0.3	10:43 17.6	17:02 3.2	22:50 18.2
☾	Th	11	5:32 1.2	11:35 16.8	17:57 4.0	23:44 17.2
	F	12	6:28 2.2	12:32 16.0	18:58 4.6	. . . . .
	S	13	0:43 16.4	7:31 3.0	13:34 15.4	20:05 4.8
	S	14	1:50 15.7	8:35 3.4	14:38 15.3	21:10 4.6
	M	15	3:00 15.4	9:38 3.5	15:40 15.6	22:11 4.0
	Tu	16	4:06 15.6	10:35 3.4	16:34 16.1	23:04 3.3
S	W	17	5:01 16.0	11:25 3.1	17:21 16.8	23:51 2.6
A	Th	18	5:50 16.8	12:09 2.8	18:01 17.4	. . . . .
●	F	19	0:32 1.9	6:30 16.7	12:47 2.7	18:37 17.9
	S	20	1:09 1.4	7:05 17.1	13:21 2.6	19:10 18.4
	S	21	1:42 1.1	7:36 17.4	13:52 2.7	19:41 18.8
	M	22	2:12 0.9	8:08 17.9	14:18 2.7	20:12 19.1
	Tu	23	2:44 0.7	8:40 18.2	14:46 2.7	20:45 19.3
E	W	24	3:17 0.7	9:14 18.5	15:18 2.7	21:20 19.2
	Th	25	3:54 0.9	9:52 18.5	15:55 2.9	22:02 18.9
	F	26	4:35 1.4	10:37 18.2	16:40 3.3	22:48 18.3
☽	S	27	5:24 2.1	11:28 17.6	17:35 4.0	23:42 17.4
	S	28	6:23 3.0	12:27 16.9	18:46 4.6	. . . . .
	M	29	0:48 16.5	7:34 3.7	13:36 16.3	20:14 4.6
	Tu	30	2:07 16.0	8:54 3.7	14:54 16.4	21:36 3.8
N	W	31	3:29 16.3	10:10 3.0	16:06 17.0	22:44 2.4

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:42 17.2	11:14 2.1	17:10 18.2	23:42 0.9
P	F	2	5:44 18.2	12:08 1.2	18:04 19.3	. . . . .
○	S	3	0:33 —0.5	6:37 19.2	12:57 0.5	18:51 20.2
	S	4	1:20 —1.4	7:24 19.8	13:41 0.1	19:35 20.9
	M	5	2:08 —1.9	8:07 20.0	14:24 0.2	20:16 21.0
E	Tu	6	2:45 —1.8	8:48 19.8	15:08 0.6	20:56 20.7
	W	7	3:27 —1.3	9:27 19.3	15:45 1.3	21:36 20.0
	Th	8	4:08 —0.3	10:08 18.5	16:25 2.3	22:17 18.9
	F	9	4:58 1.0	10:50 17.5	17:10 3.4	23:02 17.6
☾	S	10	5:42 2.5	11:39 16.3	18:08 4.5	23:54 16.3
	S	11	6:40 3.9	12:33 15.3	19:10 5.2	. . . . .
	M	12	0:58 15.1	7:49 4.8	13:40 14.6	20:25 5.3
S	Tu	13	2:16 14.4	9:02 5.1	14:54 14.6	21:37 4.8
A	W	14	3:35 14.4	10:06 4.8	16:00 15.1	22:38 3.9
	Th	15	4:41 15.0	11:04 4.0	16:55 16.1	23:28 2.8
	F	16	5:32 15.9	11:50 3.2	17:40 17.2	. . . . .
	S	17	0:12 1.7	6:13 16.7	12:30 2.5	18:17 18.2
●	S	18	0:48 0.9	6:47 17.6	13:04 2.0	18:52 18.9
	M	19	1:22 0.2	7:18 18.3	13:35 1.7	19:23 19.5
	Tu	20	1:52 —0.1	7:47 18.9	14:02 1.5	19:53 19.9
E	W	21	2:22 —0.2	8:18 19.3	14:28 1.5	20:25 20.1
	Th	22	2:58 —0.1	8:50 19.6	14:58 1.6	20:58 20.0
	F	23	3:27 0.3	9:25 19.4	15:31 1.9	21:35 19.5
	S	24	4:03 1.1	10:05 18.9	16:10 2.5	22:18 18.6
☽	S	25	4:47 2.2	10:51 17.9	17:01 3.5	23:11 17.4
	M	26	5:43 3.6	11:47 16.7	18:12 4.6	. . . . .
N	Tu	27	0:19 16.1	7:00 4.8	13:00 15.6	19:46 5.0
	W	28	1:45 15.3	8:35 4.9	14:27 15.3	21:18 4.0
	Th	29	3:19 15.5	9:58 4.1	15:51 16.3	22:30 2.4

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:37 16.7	11:03 2.7	16:57 17.8	23:30 0.7
	S	2	5:36 18.1	11:57 1.3	17:49 19.3	. . . . .
○	S	3	0:18 —0.9	6:25 19.3	12:42 0.3	18:34 20.5
E	M	4	1:02 —1.9	7:08 20.1	13:24 —0.3	19:15 21.2
	Tu	5	1:42 —2.3	7:45 20.4	14:02 —0.4	19:55 21.3
	W	6	2:22 —2.1	8:22 20.3	14:38 0.0	20:31 21.0
	Th	7	2:59 —1.3	8:57 19.8	15:13 0.7	21:07 20.2
	F	8	3:35 0.0	9:31 19.0	15:50 1.8	21:48 19.0
	S	9	4:13 1.5	10:07 17.9	16:28 3.0	22:23 17.7
☾	S	10	4:55 3.2	10:48 16.7	17:15 4.2	23:10 16.2
S	M	11	5:47 4.8	11:35 15.5	18:17 5.2	. . . . .
	Tu	12	0:10 14.8	6:56 6.0	12:40 14.4	19:38 5.5
A	W	13	1:31 13.9	8:20 6.2	14:00 14.1	20:57 5.1
	Th	14	3:00 13.8	9:35 5.7	15:19 14.7	22:05 4.0
	F	15	4:12 14.7	10:35 4.5	16:21 15.9	22:57 2.7
	S	16	5:04 15.9	11:22 3.3	17:10 17.2	23:42 1.4
	S	17	5:45 17.2	12:02 2.3	17:50 18.4	. . . . .
●	M	18	0:18 0.3	6:18 18.3	12:38 1.4	18:27 19.4
E	Tu	19	0:54 —0.4	6:52 19.2	13:10 0.9	18:59 20.0
	W	20	1:21 —0.7	7:22 19.8	13:40 0.7	19:31 20.4
	Th	21	1:55 —0.7	7:54 20.2	14:07 0.7	20:02 20.4
	F	22	2:27 —0.3	8:25 20.1	14:38 1.0	20:38 20.1
	S	23	3:00 0.4	9:00 19.7	15:13 1.5	21:15 19.5
	S	24	3:37 1.4	9:39 18.9	15:53 2.3	22:00 18.4
	M	25	4:31 2.9	10:25 17.6	16:45 3.5	22:54 17.0
N ☽	Tu	26	5:19 4.4	11:21 16.3	18:02 4.5	. . . . .
	W	27	0:05 15.6	6:45 5.7	12:38 15.1	19:35 4.7
P	Th	28	1:39 14.8	8:27 5.5	14:12 15.0	21:08 3.7
	F	29	3:13 15.4	9:47 4.4	15:34 16.2	22:13 2.0
	S	30	4:26 16.6	10:50 2.8	16:38 17.8	23:08 0.3
	S	31	5:20 18.2	11:38 1.4	17:29 19.2	23:56 —1.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 10 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	4:34	10:38	16:45	22:55
			15.1	1.0	14.2	1.0
	W	2	5:17	11:20	17:26	23:44
			14.2	2.1	13.2	1.9
N	Th	3	6:10	12:09	18:19	. . .
☾			13.0	3.4	12.1	. . .
	F	4	0:45	7:28	13:15	19:42
			2.9	11.7	4.7	11.0
	S	5	2:10	9:42	15:12	21:56
			3.8	11.4	5.6	11.5
	S	6	3:58	11:07	17:00	23:12
			3.5	12.5	4.7	13.2
P	M	7	5:17	12:07	18:00	. . .
			2.2	13.8	3.2	. . .
	Tu	8	0:08	6:15	12:52	18:43
			14.8	0.7	15.1	1.9
E	W	9	0:54	7:02	13:33	19:23
			16.2	—0.5	16.1	0.8
●	Th	10	1:36	7:45	14:10	20:00
			17.2	—1.3	16.6	0.0
	F	11	2:18	8:28	14:47	20:33
			17.7	—1.5	16.6	—0.3
	S	12	2:57	9:02	15:20	21:08
			17.6	—1.1	16.2	—0.4
	S	13	3:37	9:38	15:53	21:43
			17.0	—0.3	15.5	0.0
	M	14	4:15	10:11	16:25	22:20
			16.0	0.9	14.5	0.7
	Tu	15	4:57	10:45	16:57	23:00
			14.7	2.2	13.4	1.7
S	W	16	5:43	11:18	17:34	23:47
			13.2	3.6	12.2	2.8
	Th	17	6:43	11:59	18:22	. . .
			11.7	4.9	11.1	. . .
☽	F	18	0:45	8:18	12:54	20:08
			4.0	10.7	6.0	10.4
A	S	19	2:18	9:56	15:32	21:52
			4.9	10.7	6.6	11.2
	S	20	4:01	11:01	16:55	22:57
			4.6	11.2	5.7	12.1
	M	21	5:05	11:50	17:42	23:46
			3.8	12.1	4.7	13.1
	Tu	22	5:53	12:28	18:18	. . .
			2.9	13.1	3.7	. . .
E	W	23	0:27	6:29	13:00	18:46
			14.1	2.0	13.9	2.8
	Th	24	1:01	7:00	13:28	19:12
			14.8	1.1	14.6	1.9
	F	25	1:34	7:30	13:55	19:40
			15.4	0.5	15.0	1.0
○	S	26	2:02	8:00	14:20	20:09
			15.7	0.1	15.3	0.3
	S	27	2:33	8:30	14:48	20:41
			16.0	—0.1	15.5	—0.1
	M	28	3:06	9:02	15:20	21:18
			16.0	0.0	15.4	—0.2
	Tu	29	3:43	9:38	15:53	21:59
			15.6	0.5	15.0	0.0
N	W	30	4:22	10:17	16:29	22:44
			14.9	1.3	14.2	0.7
	Th	31	5:09	11:00	17:14	23:37
			14.0	2.5	13.3	1.6

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	6:10	11:55	18:11	. . .
			12.7	3.7	12.2	. . .
☾	S	2	0:42	7:45	13:05	19:45
			2.6	11.6	4.5	11.4
P	S	3	2:06	9:31	15:03	21:33
			3.3	11.8	5.4	12.2
	M	4	3:45	10:48	16:35	22:47
			3.0	12.7	4.5	13.5
E	Tu	5	4:58	11:44	17:33	23:43
			1.9	13.8	3.2	14.9
	W	6	5:53	12:30	18:19	. . .
			0.8	14.8	2.0	. . .
	Th	7	0:32	6:42	13:10	18:59
			16.0	0.0	15.6	1.1
	F	8	1:17	7:23	13:47	19:37
			16.6	—0.3	16.0	0.4
●	S	9	2:00	8:04	14:22	20:12
			16.9	—0.3	16.0	0.1
	S	10	2:40	8:40	14:57	20:48
			16.7	0.2	15.6	0.0
	M	11	3:20	9:13	15:28	21:24
			16.1	0.9	15.0	0.3
S	Tu	12	4:00	9:43	16:00	22:02
			15.1	1.8	14.2	0.9
	W	13	4:39	10:13	16:30	22:42
			14.0	2.8	13.3	1.6
	Th	14	5:22	10:45	17:06	23:27
			12.7	3.7	12.5	2.5
	F	15	6:14	11:23	17:51	. . .
			11.6	4.6	11.6	. . .
A	S	16	0:20	7:28	12:10	18:58
☽			3.5	10.7	5.4	11.0
	S	17	1:27	8:55	13:20	20:42
			4.2	10.5	6.0	11.0
	M	18	2:50	10:07	15:17	21:58
			4.5	11.0	6.1	11.7
	Tu	19	4:02	10:58	16:32	22:55
			4.0	11.7	5.3	12.5
E	W	20	4:56	11:40	17:18	23:42
			3.3	12.5	4.2	13.4
	Th	21	5:40	12:16	17:58	. . .
			2.5	13.3	3.2	. . .
	F	22	0:22	6:19	12:50	18:33
			14.1	1.8	14.1	2.1
	S	23	1:00	6:55	13:22	19:10
			14.8	1.1	14.7	1.1
○	S	24	1:37	7:31	13:55	19:47
			15.3	0.6	15.1	0.3
	M	25	2:13	8:08	14:28	20:25
			15.6	0.5	15.4	—0.2
N	Tu	26	2:53	8:45	15:05	21:07
			15.7	0.5	15.4	—0.4
	W	27	3:35	9:26	15:43	21:52
			15.4	0.9	15.1	—0.2
P	Th	28	4:21	10:09	16:27	22:41
			14.8	1.7	14.4	0.3
	F	29	5:13	10:55	17:15	23:37
			14.0	2.5	13.7	1.1
	S	30	6:18	11:50	18:15	. . .
			13.0	3.5	13.0	. . .

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:40	7:38	12:58	19:35
			1.9	12.8	4.4	12.6
	M	2	1:57	9:00	14:29	21:00
			2.5	12.3	4.8	12.9
E	Tu	3	3:17	10:15	15:58	22:15
			2.6	12.7	4.4	13.6
	W	4	4:30	11:18	16:58	23:17
			2.2	13.3	3.5	14.4
	Th	5	5:30	12:05	17:52	. . .
			1.7	14.0	2.6	. . .
	F	6	0:12	6:22	12:48	18:37
			15.1	1.4	14.6	1.8
	S	7	1:02	7:08	13:28	19:20
			15.6	1.2	15.0	1.2
●	S	8	1:47	7:49	14:06	20:00
			15.7	1.3	15.1	0.8
S	M	9	2:30	8:25	14:40	20:37
			15.5	1.6	15.0	0.7
	Tu	10	3:11	8:58	15:15	21:15
			15.0	2.1	14.6	0.8
	W	11	3:50	9:28	15:47	21:52
			14.4	2.6	14.1	1.1
	Th	12	4:28	9:55	16:18	22:30
			13.6	3.1	13.6	1.5
	F	13	5:04	10:25	16:53	23:10
			12.8	3.6	13.1	2.1
A	S	14	5:45	11:00	17:30	23:53
			12.0	4.0	12.6	2.6
	S	15	6:25	11:40	18:15	. . .
			11.4	4.3	12.1	. . .
☽	M	16	0:40	7:21	12:30	19:12
			3.2	11.0	4.7	11.7
E	Tu	17	1:34	8:28	13:31	20:22
			3.6	10.8	5.0	11.5
	W	18	2:37	9:36	14:42	21:38
			3.8	11.0	4.9	11.7
	Th	19	3:40	10:35	15:57	22:45
			3.8	11.6	4.5	12.4
	F	20	4:42	11:27	17:03	23:40
			3.4	12.4	3.6	13.1
	S	21	5:37	12:12	17:57	. . .
			3.2	13.2	2.6	. . .
	S	22	0:32	6:25	12:56	18:46
			13.9	2.1	14.1	1.5
	M	23	1:18	7:12	13:37	19:32
			14.7	1.5	14.8	0.5
N	Tu	24	2:04	7:55	14:17	20:17
○			15.2	1.1	15.3	—0.2
	W	25	2:49	8:37	14:59	21:02
			15.5	1.0	15.5	—0.6
P	Th	26	3:35	9:21	15:41	21:50
			15.5	1.1	15.6	—0.7
	F	27	4:22	10:06	16:25	22:40
			15.2	1.4	15.3	—0.5
	S	28	5:12	10:51	17:14	23:32
			14.7	2.0	14.9	0.1
	S	29	6:06	11:40	18:06	. . .
			14.0	2.6	14.3	. . .
E	M	30	0:27	7:10	12:36	19:10
☾			0.9	13.2	3.4	13.7
	Tu	31	1:30	8:17	13:41	20:22
			1.8	12.6	4.0	13.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon: for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:43	9:24	15:27	22:01
			16.9	2.3	17.5	3.0
	Tu	2	3:52	10:28	16:28	23:00
			17.4	1.7	18.3	1.8
	W	3	4:55	11:24	17:23	23:55
			18.1	1.0	19.0	0.7
N ○ P	Th	4	5:51	12:17	18:14	. . .
			18.9	0.6	19.6	. . .
	F	5	0:45	6:43	13:06	19:01
			−0.2	19.3	0.5	20.1
	S	6	1:31	7:32	13:52	19:47
			−0.7	19.5	0.6	20.3
	S	7	2:18	8:20	14:39	20:32
			−0.9	19.4	1.0	20.2
	M	8	3:08	9:06	15:24	21:16
			−0.8	19.0	1.7	19.7
	Tu	9	3:50	9:54	16:12	22:02
			−0.4	18.4	2.4	19.1
E	W	10	4:40	10:43	17:02	22:50
			0.3	17.6	3.2	18.2
☾	Th	11	5:32	11:35	17:57	23:44
			1.2	16.8	4.0	17.2
	F	12	6:28	12:32	18:58	. . .
			2.2	16.0	4.6	. . .
	S	13	0:43	7:31	13:34	20:05
			16.4	3.0	15.4	4.8
	S	14	1:50	8:35	14:38	21:10
			15.7	3.4	15.3	4.6
	M	15	3:00	9:38	15:40	22:11
			15.4	3.5	15.6	4.0
	Tu	16	4:05	10:35	16:34	23:04
			15.6	3.4	16.1	3.3
S	W	17	5:01	11:25	17:21	23:51
			16.0	3.1	16.8	2.6
A	Th	18	5:50	12:09	18:01	. . .
			16.3	2.8	17.4	. . .
●	F	19	0:32	6:30	12:47	18:37
			1.9	16.7	2.7	17.9
	S	20	1:09	7:05	13:21	19:10
			1.4	17.1	2.6	18.4
	S	21	1:42	7:36	13:52	19:41
			1.1	17.4	2.7	18.3
	M	22	2:12	8:08	14:18	20:12
			0.9	17.9	2.7	19.1
	Tu	23	2:44	8:40	14:46	20:45
			0.7	18.2	2.7	19.3
E	W	24	3:17	9:14	15:18	21:20
			0.7	18.5	2.7	19.2
	Th	25	3:54	9:52	15:55	22:02
			0.9	18.5	2.9	18.9
	F	26	4:35	10:37	16:40	22:48
			1.4	18.2	3.3	18.3
☽	S	27	5:24	11:28	17:35	23:42
			2.1	17.6	4.0	17.4
	S	28	6:23	12:27	18:46	. . .
			3.0	16.9	4.6	. . .
	M	29	0:48	7:34	13:36	20:14
			16.5	3.7	16.3	4.6
	Tu	30	2:07	8:54	14:54	21:36
			16.0	3.7	16.4	3.8
N	W	31	3:29	10:10	16:06	22:44
			16.3	3.0	17.0	2.4

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:42	11:14	17:10	23:42
			17.2	2.1	18.2	0.9
P	F	2	5:44	12:08	18:04	. . .
			18.2	1.2	19.3	. . .
○	S	3	0:33	6:37	12:57	18:51
			−0.5	19.2	0.5	20.2
	S	4	1:20	7:24	13:41	19:35
			−1.4	19.3	0.1	20.9
	M	5	2:03	8:07	14:24	20:16
			−1.9	20.0	0.2	21.0
E	Tu	6	2:45	8:48	15:03	20:56
			−1.8	19.8	0.6	20.7
	W	7	3:27	9:27	15:45	21:36
			−1.3	19.3	1.3	20.0
	Th	8	4:06	10:08	16:25	22:17
			−0.8	18.5	2.3	18.9
	F	9	4:58	10:50	17:10	23:02
			1.0	17.5	3.4	17.6
☾	S	10	5:42	11:39	18:08	23:54
			2.5	16.3	4.5	16.3
	S	11	6:40	12:33	19:10	. . .
			3.9	15.3	5.2	. . .
	M	12	0:58	7:49	13:40	20:25
			15.1	4.8	14.6	5.3
S	Tu	13	2:16	9:02	14:54	21:37
			14.4	5.1	14.6	4.8
A	W	14	3:35	10:08	16:00	22:38
			14.4	4.8	15.1	3.9
	Th	15	4:41	11:04	16:55	23:28
			15.0	4.0	16.1	2.8
	F	16	5:32	11:50	17:40	. . .
			15.9	3.2	17.2	. . .
	S	17	0:12	6:13	12:30	18:17
			1.7	16.7	2.5	18.2
●	S	18	0:48	6:47	13:04	18:52
			0.9	17.6	2.0	18.9
	M	19	1:22	7:18	13:35	19:23
			0.2	18.3	1.7	19.5
	Tu	20	1:52	7:47	14:02	19:53
			−0.1	18.9	1.5	19.9
E	W	21	2:22	8:18	14:28	20:25
			−0.2	19.3	1.5	20.1
	Th	22	2:58	8:50	14:58	20:58
			−0.1	19.6	1.6	20.0
	F	23	3:27	9:25	15:31	21:35
			0.3	19.4	1.9	19.5
	S	24	4:08	10:05	16:10	22:18
			1.1	18.9	2.5	18.6
☽	S	25	4:47	10:51	17:01	23:11
			2.2	17.9	3.5	17.4
	M	26	5:43	11:47	18:12	. . .
			3.6	16.7	4.6	. . .
N	Tu	27	0:19	7:00	13:00	19:46
			16.1	4.8	15.6	5.0
	W	28	1:45	8:35	14:27	21:18
			15.3	4.9	15.3	4.0
	Th	29	3:19	9:58	15:51	22:30
			15.5	4.1	16.3	2.4

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:37	11:03	16:57	23:30
			16.7	2.7	17.8	0.7
	S	2	5:36	11:57	17:49	. . .
			18.1	1.8	19.3	. . .
○	S	3	0:18	6:25	12:42	18:34
			−0.9	19.3	0.3	20.5
E	M	4	1:02	7:08	13:24	19:15
			−1.9	20.1	−0.3	21.2
	Tu	5	1:42	7:45	14:02	19:55
			−2.3	20.4	−0.4	21.3
	W	6	2:22	8:22	14:38	20:31
			−2.1	20.3	0.0	21.0
	Th	7	2:59	8:57	15:13	21:07
			−1.3	19.8	0.7	20.2
	F	8	3:35	9:31	15:50	21:43
			0.0	19.0	1.8	19.0
	S	9	4:13	10:07	16:28	22:23
			1.5	17.9	3.0	17.7
☾	S	10	4:55	10:48	17:15	23:10
			3.2	16.7	4.2	16.2
S	M	11	5:47	11:35	18:17	. . .
			4.8	15.5	5.2	. . .
	Tu	12	0:10	6:56	12:40	19:38
			14.8	6.0	14.4	5.5
A	W	13	1:31	8:20	14:00	20:57
			13.9	6.2	14.1	5.1
	Th	14	3:00	9:35	15:19	22:06
			13.8	5.7	14.7	4.0
	F	15	4:12	10:35	16:21	22:57
			14.7	4.5	15.9	2.7
	S	16	5:04	11:22	17:10	23:42
			15.9	3.3	17.2	1.4
	S	17	5:45	12:02	17:50	. . .
			17.2	2.3	18.4	. . .
●	M	18	0:18	6:18	12:38	18:27
			0.3	18.3	1.4	19.4
E	Tu	19	0:54	6:52	13:10	18:59
			−0.4	19.2	0.9	20.0
	W	20	1:21	7:22	13:40	19:31
			−0.7	19.8	0.7	20.4
	Th	21	1:55	7:54	14:07	20:02
			−0.7	20.2	0.7	20.4
	F	22	2:27	8:25	14:38	20:38
			−0.3	20.1	1.0	20.1
	S	23	3:00	9:00	15:13	21:15
			0.4	19.7	1.5	19.5
	S	24	3:37	9:39	15:53	22:00
			1.4	18.9	2.3	18.4
	M	25	4:31	10:25	16:45	22:54
			2.9	17.6	3.5	17.0
N ☽	Tu	26	5:19	11:21	18:02	. . .
			4.4	16.3	4.5	. . .
	W	27	0:05	6:45	12:38	19:35
			15.6	5.7	15.1	4.7
P	Th	28	1:39	8:27	14:12	21:08
			14.8	5.5	15.0	3.7
	F	29	3:18	9:47	15:34	22:13
			15.4	4.4	16.2	2.0
	S	30	4:26	10:50	16:38	23:08
			16.6	2.8	17.8	0.3
	S	31	5:20	11:38	17:29	23:56
			18.2	1.4	19.2	−1.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 10 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	6:05	12:22	18:14	. . .
			19.3	0.3	20.3	. . .
	Tu	2	0:38	6:44	13:01	18:53
			−1.8	20.1	−0.3	20.8
	W	3	1:18	7:20	13:37	19:29
			−1.9	20.3	−0.3	20.8
	Th	4	1:55	7:52	14:11	20:05
			−1.4	20.1	0.0	20.3
	F	5	2:30	8:25	14:45	20:39
			−0.4	19.6	0.8	19.6
	S	6	3:03	8:57	15:17	21:13
			0.9	18.9	1.7	18.6
	S	7	3:37	9:30	15:55	21:51
			2.4	17.9	2.8	17.4
S	M	8	4:13	10:06	16:39	22:35
			3.9	16.9	3.8	16.1
☾	Tu	9	4:57	10:50	17:37	23:32
			5.3	15.7	4.7	14.9
A	W	10	6:09	11:50	18:52	. . .
			6.4	14.8	5.2	. . .
	Th	11	0:47	7:38	13:10	20:11
			14.0	6.6	14.4	4.8
	F	12	2:14	8:52	14:29	21:20
			14.0	6.0	14.9	3.8
	S	13	3:25	9:53	15:37	22:15
			14.9	4.7	16.0	2.4
	S	14	4:21	10:44	16:30	23:02
			16.3	3.4	17.3	1.1
E	M	15	5:05	11:27	17:14	23:43
			17.6	2.1	18.5	0.1
	Tu	16	5:43	12:05	17:54	. . .
			18.9	1.1	19.5	. . .
●	W	17	0:21	6:20	12:40	18:30
			−0.6	19.8	0.5	20.0
	Th	18	0:56	6:55	13:15	19:07
			−0.8	20.3	0.3	20.2
	F	19	1:30	7:28	13:48	19:43
			−0.5	20.4	0.3	20.2
	S	20	2:05	8:08	14:23	20:21
			0.1	20.2	0.7	19.7
	S	21	2:41	8:40	15:08	21:02
			1.1	19.5	1.4	18.9
N P	M	22	3:22	9:21	15:50	21:51
			2.3	18.5	2.3	17.8
	Tu	23	4:10	10:09	16:47	22:50
			3.7	17.3	3.3	16.5
☽	W	24	5:15	11:10	18:02	. . .
			5.1	16.0	3.9	. . .
	Th	25	0:06	6:45	12:27	19:25
			15.3	5.7	15.2	3.8
	F	26	1:35	8:14	13:55	20:44
			15.0	5.4	15.4	2.8
	S	27	2:59	9:27	15:10	21:48
			15.5	4.3	16.5	2.6
E	S	28	4:05	10:25	16:12	22:42
			16.7	3.0	17.7	0.4
	M	29	4:55	11:14	17:02	23:30
			18.0	1.7	18.8	−0.6
	Tu	30	5:38	11:57	17:47	. . .
			18.9	0.8	19.6	. . .

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	0:12	6:17	12:36	18:28
			−0.9	19.5	0.3	19.8
	Th	2	0:52	6:52	13:12	19:05
			−0.7	19.6	0.3	19.6
	F	3	1:30	7:24	13:48	19:40
			−0.1	19.5	0.6	19.2
	S	4	2:03	7:55	14:20	20:14
			0.9	19.0	1.2	18.5
S	S	5	2:35	8:26	14:53	20:48
			2.1	18.4	1.9	17.7
	M	6	3:07	8:57	15:32	21:25
			3.3	17.7	2.6	16.9
A	Tu	7	3:39	9:33	16:15	22:09
			4.4	17.0	3.3	16.1
	W	8	4:20	10:18	17:08	23:02
			5.4	16.3	4.0	15.3
☾	Th	9	5:07	11:14	18:12	. . .
			6.1	15.6	4.3	. . .
	F	10	0:10	6:35	12:21	19:21
			14.8	6.3	15.3	4.1
	S	11	1:22	7:57	13:35	20:27
			14.8	5.8	15.5	3.3
	S	12	2:32	9:02	14:43	21:26
			15.5	4.8	16.3	2.3
E	M	13	3:30	9:57	15:42	22:17
			16.6	3.6	17.3	1.3
	Tu	14	4:30	10:45	16:33	23:03
			17.9	2.4	18.3	0.4
	W	15	5:05	11:30	17:20	23:47
			19.0	1.4	19.1	−0.1
●	Th	16	5:47	12:10	18:04	. . .
			19.8	0.7	19.5	. . .
	F	17	0:27	6:28	12:51	18:45
			−0.2	20.2	0.3	19.8
	S	18	1:08	7:06	13:31	19:27
			0.0	20.2	0.3	19.6
N P	S	19	1:48	7:47	14:13	20:11
			0.7	19.9	0.6	19.2
	M	20	2:30	8:27	14:58	20:58
			1.6	19.2	1.0	18.4
	Tu	21	3:17	9:14	15:50	21:50
			2.7	18.4	1.7	17.5
	W	22	4:11	10:04	16:49	22:52
			3.8	17.4	2.3	16.6
☽	Th	23	5:16	11:05	17:55	. . .
			4.8	16.6	2.7	. . .
	F	24	0:02	6:33	12:15	19:06
			15.9	5.1	16.2	2.6
E	S	25	1:18	7:48	13:30	20:15
			15.6	4.8	16.2	2.2
	S	26	2:30	8:56	14:38	21:17
			15.8	4.2	16.7	1.5
	M	27	3:32	9:53	15:40	22:12
			16.6	3.3	17.3	0.9
	Tu	28	4:25	10:44	16:33	23:02
			17.4	2.4	17.9	0.5
	W	29	5:10	11:30	17:22	23:48
			18.1	1.7	18.3	0.5
○	Th	30	5:49	12:11	18:05	. . .
			18.5	1.3	18.4	. . .
	F	31	0:29	6:26	12:50	18:44
			0.8	18.6	1.2	1.7

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	1:07	7:00	12:27	19:21
			1.4	18.5	1.3	17.8
	S	2	1:42	7:32	14:02	19:55
			2.2	18.3	1.6	17.4
	M	3	2:14	8:03	14:36	20:30
			3.0	18.0	2.0	17.0
A	Tu	4	2:43	8:37	15:13	21:06
			3.8	17.7	2.3	16.7
	W	5	3:15	9:12	15:54	21:47
			4.5	17.5	2.7	16.4
	Th	6	3:53	9:54	16:40	22:35
			4.9	17.2	3.0	16.2
	F	7	4:42	10:44	17:34	23:30
			5.3	16.8	3.1	16.0
☾	S	8	5:43	11:41	18:32	. . .
			5.4	16.5	3.2	. . .
E	S	9	0:31	6:51	12:43	19:32
			16.0	5.3	16.4	2.9
	M	10	1:35	8:01	13:48	20:33
			16.3	4.7	16.6	2.4
	Tu	11	2:36	9:05	14:52	21:31
			16.9	3.9	17.1	1.8
	W	12	3:34	10:04	15:52	22:25
			17.7	2.9	17.7	1.2
	Th	13	4:28	10:57	16:48	23:17
			18.5	1.9	18.3	0.8
	F	14	5:17	11:46	17:40	. . .
			19.2	1.1	18.8	. . .
● N	S	15	0:07	6:05	12:34	18:30
			0.6	19.7	0.5	19.2
P	S	16	0:58	6:50	13:20	19:18
			0.7	19.8	0.2	19.2
	M	17	1:39	7:35	14:06	20:06
			1.0	19.7	0.1	18.9
	Tu	18	2:26	8:20	14:54	20:55
			1.6	19.5	0.2	18.5
	W	19	3:14	9:08	15:45	21:48
			2.3	19.0	0.5	17.9
	Th	20	4:07	9:58	16:38	22:44
			3.1	18.4	0.9	17.3
☽	F	21	5:05	10:52	17:36	23:42
			3.7	17.7	1.4	16.6
E	S	22	6:06	11:51	18:36	. . .
			4.2	17.1	1.8	. . .
	S	23	0:45	7:11	12:55	19:40
			16.0	4.4	16.7	2.1
	M	24	1:50	8:16	14:00	20:42
			16.0	4.2	16.5	2.2
	Tu	25	2:52	9:18	15:04	21:41
			16.1	3.8	16.5	2.1
	W	26	3:40	10:14	16:04	22:35
			16.4	3.3	16.7	2.1
	Th	27	4:39	11:05	17:00	23:25
			16.9	2.7	16.9	2.0
	F	28	5:24	11:52	17:48	. . .
			17.4	2.2	17.0	. . .
S ○	S	29	0:10	6:05	12:34	18:30
			2.2	17.6	1.8	17.0
	S	30	0:50	6:41	13:12	19:08
			2.4	17.9	1.7	16.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 10 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:26	7:15	13:49	19:42
			2.8	18.0	1.7	16.8
A	Tu	2	1:59	7:47	14:22	20:15
			3.2	18.1	1.7	16.9
	W	3	2:27	8:19	14:55	20:50
			3.6	18.2	1.7	17.0
	Th	4	2:56	8:52	15:31	21:25
			3.8	18.2	1.7	17.2
	F	5	3:30	9:31	16:11	22:06
			4.0	18.2	1.9	17.3
E	S	6	4:09	10:14	16:54	22:52
			4.0	18.0	2.1	17.3
☾	S	7	4:56	11:02	17:43	23:44
			4.2	17.7	2.4	17.1
	M	8	5:52	11:56	18:40	. . .
			4.4	17.3	2.7	. . .
	Tu	9	0:42	7:00	12:57	19:43
			17.0	4.5	16.9	2.9
	W	10	1:45	8:13	14:05	20:48
			16.9	4.3	16.7	2.8
	Th	11	2:50	9:25	15:15	21:54
			17.2	3.6	16.9	2.4
	F	12	3:55	10:30	16:28	22:56
			17.7	2.6	17.4	1.8
N	S	13	4:55	11:28	17:34	23:51
			18.3	1.4	18.2	1.3
●	S	14	5:48	12:20	18:19	. . .
			19.1	0.5	18.8	. . .
P	M	15	0:43	6:39	13:09	19:10
			0.9	19.7	—0.4	19.1
	Tu	16	1:32	7:26	13:56	19:58
			0.8	20.1	—0.8	19.3
	W	17	2:17	8:11	14:42	20:46
			0.9	20.3	—1.0	19.2
	Th	18	3:03	8:56	15:29	21:31
			1.3	20.1	—0.7	18.8
E	F	19	3:50	9:41	16:16	22:20
			1.9	19.6	—0.2	18.2
	S	20	4:38	10:28	17:07	23:10
			2.6	18.8	0.6	17.4
☽	S	21	5:30	11:19	18:00	. . .
			3.4	17.9	1.7	. . .
	M	22	0:04	6:27	12:15	19:01
			16.6	4.1	16.9	2.6
	Tu	23	1:02	7:32	13:20	20:05
			15.8	4.5	16.0	3.3
	W	24	2:06	8:40	14:29	21:11
			15.4	4.5	15.5	3.7
	Th	25	3:11	9:45	15:39	22:12
			15.4	4.1	15.5	3.6
S	F	26	4:11	10:43	16:42	23:07
			15.9	3.5	15.7	3.3
	S	27	5:02	11:33	17:36	23:54
			16.4	2.7	16.1	3.0
	S	28	5:47	12:17	18:19	. . .
			17.1	2.0	16.5	. . .
○ A	M	29	0:36	6:25	12:57	18:56
			2.8	17.7	1.5	16.8
	Tu	30	1:12	6:59	13:32	19:27
			2.7	18.2	1.1	17.2
	W	31	1:43	7:31	14:02	19:58
			2.7	18.6	0.9	17.6

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:11	8:01	14:32	20:28
			2.7	18.9	0.9	18.0
E	F	2	2:36	8:31	15:08	20:59
			2.8	19.1	0.8	18.3
	S	3	3:05	9:06	15:36	21:34
			2.8	19.2	1.0	18.5
	S	4	3:36	9:43	16:14	22:14
			2.8	19.0	1.4	18.4
	M	5	4:16	10:26	16:57	23:01
			3.0	18.5	2.0	17.9
☾	Tu	6	5:06	11:14	17:50	23:56
			3.6	17.7	2.9	17.2
	W	7	6:10	12:15	18:57	. . .
			4.3	16.8	3.7	. . .
	Th	8	1:00	7:31	13:29	20:14
			16.5	4.6	16.1	4.0
N	F	9	2:13	8:57	14:51	21:33
			16.3	4.1	16.1	3.6
	S	10	3:30	10:11	16:10	22:42
			16.6	2.9	16.8	2.7
	S	11	4:38	11:14	17:15	23:41
			17.7	1.4	17.8	1.7
P ●	M	12	5:35	12:08	18:10	. . .
			18.9	0.0	18.8	. . .
	Tu	13	0:32	6:26	12:56	19:00
			0.8	20.0	—1.1	19.6
	W	14	1:19	7:11	13:40	19:44
			0.2	20.8	—1.8	20.0
E	Th	15	2:01	7:54	14:33	20:26
			0.1	21.1	—1.9	20.1
	F	16	2:42	8:36	15:05	21:07
			0.3	21.0	—1.5	19.7
	S	17	3:23	9:15	15:47	21:47
			0.9	20.4	—0.6	18.9
	S	18	4:03	9:58	16:31	22:31
			1.8	19.3	0.7	17.9
☽	M	19	4:48	10:42	17:20	23:16
			2.9	18.0	2.2	16.7
	Tu	20	5:41	11:34	18:18	. . .
			4.0	16.6	3.6	. . .
	W	21	0:11	6:47	12:38	19:27
			15.6	4.8	15.4	4.7
S	Th	22	1:18	8:02	13:55	20:41
			14.8	5.0	14.6	5.1
	F	23	2:32	9:15	15:16	21:49
			14.6	4.7	14.5	4.8
	S	24	3:42	10:18	16:26	22:48
			15.1	3.8	15.0	4.1
A	S	25	4:39	11:11	17:20	23:36
			16.0	2.8	15.8	3.3
	M	26	5:25	11:55	18:00	. . .
			17.0	1.8	16.6	. . .
○	Tu	27	0:15	6:04	12:33	18:35
			2.6	18.0	0.9	17.4
	W	28	0:50	6:38	13:06	19:04
			2.1	18.8	0.3	18.1
	Th	29	1:20	7:09	13:38	19:32
			1.8	19.3	0.1	18.6
E	F	30	1:47	7:38	14:05	20:00
			1.7	19.7	0.0	19.0
	S	31	2:12	8:08	14:34	20:30
			1.7	19.8	0.2	19.3

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	2:38	8:38	15:04	21:03
			1.7	19.8	0.6	19.3
	M	2	3:06	9:14	15:37	21:40
			1.9	19.4	1.2	18.9
	Tu	3	3:46	10:55	16:17	22:23
			2.3	18.7	2.1	18.2
☾	W	4	4:32	10:44	17:07	23:16
			3.1	17.7	3.4	17.0
	Th	5	5:36	11:46	18:20	. . .
			4.2	16.4	4.7	. . .
N	F	6	0:24	7:06	13:06	19:52
			15.9	4.9	15.5	5.2
	S	7	1:46	8:40	14:38	21:24
			15.4	4.3	15.4	4.5
	S	8	3:13	9:59	16:02	22:32
			16.0	2.8	16.4	3.1
P	M	9	4:24	10:58	15:05	23:28
			17.5	1.0	17.9	1.7
	Tu	10	5:20	11:51	17:57	. . .
			19.1	—0.7	19.2	. . .
●	W	11	0:16	6:09	12:26	18:42
			0.5	20.4	—1.8	20.2
E	Th	12	0:59	6:52	13:19	19:21
			—0.3	21.2	—2.3	20.6
	F	13	1:38	7:32	13:57	20:00
			—0.6	21.5	—2.2	20.6
	S	14	2:16	8:11	14:36	20:36
			—0.3	21.2	—1.5	20.1
	S	15	2:53	8:48	15:15	21:13
			0.4	20.4	—0.3	19.2
	M	16	3:30	9:26	15:54	21:50
			1.4	19.2	1.3	18.1
	Tu	17	4:10	10:08	16:38	22:31
			2.6	17.9	3.0	16.8
☽ S	W	18	5:00	10:57	17:32	23:20
			3.9	16.4	4.7	15.5
	Th	19	6:03	11:58	18:44	. . .
			4.8	14.9	5.8	. . .
	F	20	0:24	7:23	13:19	20:06
			14.4	5.2	14.0	6.1
A	S	21	1:46	8:12	14:48	21:21
			14.1	4.8	13.9	5.6
	S	22	3:04	9:48	16:00	22:21
			14.7	3.9	14.7	4.6
	M	23	4:05	10:40	16:51	23:08
			15.9	2.6	15.9	3.4
	Tu	24	4:58	11:23	17:30	23:47
			17.1	1.4	17.1	2.3
	W	25	5:34	12:02	18:04	. . .
			18.3	0.4	18.2	. . .
E ○	Th	26	0:21	6:10	12:35	18:34
			1.5	19.2	—0.2	19.0
	F	27	0:52	6:42	13:07	19:04
			1.0	19.8	—0.5	19.6
	S	28	1:21	7:12	13:36	19:32
			0.8	20.0	—0.3	19.9
	S	29	1:48	7:42	14:05	20:02
			0.9	20.1	0.1	20.0
	M	30	2:17	8:15	14:35	20:34
			1.1	19.9	0.7	19.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 10 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon: all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	2:48	8:51	15:09	21:12
			1.5	19.4	1.5	19.0
	W	2	3:27	9:33	15:49	21:55
			2.1	18.5	2.7	18.0
N	Th	3	4:15	10:24	16:41	22:43
☾			3.1	17.2	4.2	16.6
	F	4	5:23	11:30	18:00	23:58
			4.2	15.8	5.6	15.3
	S	5	6:56	12:58	19:45	. . .
			4.7	15.0	5.8	. . .
	☉	6	1:30	8:26	14:34	21:12
			15.0	3.9	15.2	4.8
P	M	7	2:58	9:40	15:52	22:18
			16.0	2.8	16.4	3.2
	Tu	8	4:06	10:38	16:50	23:10
			17.5	0.6	18.0	1.6
E	W	9	5:00	11:28	17:37	23:55
			19.1	—0.9	19.3	0.4
●	Th	10	5:46	12:13	18:18	. . .
			20.3	—1.8	20.2	. . .
	F	11	0:36	6:28	12:54	18:56
			—0.4	21.0	—2.1	20.6
	S	12	1:15	7:07	13:32	19:31
			—0.6	21.0	—1.7	20.5
	☉	13	1:50	7:45	14:10	20:05
			—0.3	20.6	—0.7	20.0
	M	14	2:27	8:20	14:45	20:40
			—0.4	19.8	0.6	19.1
	Tu	15	3:02	8:58	15:20	21:14
			1.3	18.7	2.2	18.1
S	W	16	3:41	9:38	16:00	21:52
			2.4	17.4	3.8	16.9
	Th	17	4:28	10:24	16:47	22:36
			3.6	16.1	5.3	15.7
☽	F	18	5:26	11:22	17:54	23:37
			4.5	14.8	6.4	14.7
A	S	19	6:40	12:38	19:22	. . .
			5.0	13.9	6.6	. . .
	☉	20	0:55	7:57	14:05	20:38
			14.3	4.6	13.9	6.0
	M	21	2:15	9:03	15:14	21:40
			14.8	3.7	14.8	4.8
	Tu	22	3:20	9:59	16:07	22:28
			15.9	2.5	16.0	3.6
E	W	23	4:13	10:45	16:50	23:10
			17.1	1.3	17.4	2.3
	Th	24	4:57	11:25	17:26	23:48
			18.3	0.3	18.6	1.4
	F	25	5:35	12:02	18:01	. . .
			19.1	—0.3	19.5	. . .
○	S	26	0:22	6:18	12:36	18:34
			0.6	19.7	—0.4	20.1
	☉	27	0:54	6:45	13:08	19:07
			0.5	19.9	—0.2	20.3
	M	28	1:27	7:22	13:42	19:40
			0.5	19.9	0.3	20.1
	Tu	29	2:00	7:58	14:16	20:15
			0.8	19.6	1.2	19.6
N	W	30	2:38	8:37	14:52	20:54
			1.3	18.9	2.2	18.8
	Th	31	3:22	9:22	15:37	21:39
			2.0	18.0	3.5	17.6

NOVEMBER.

Moon	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	4:15	10:18	16:33	22:34
			3.0	16.8	4.8	16.4
☾	S	2	5:25	11:27	17:57	23:47
			3.8	15.6	5.8	15.5
P	☉	3	6:47	12:58	19:38	. . .
			3.8	15.0	5.7	. . .
	M	4	1:18	8:06	14:20	20:52
			15.4	3.1	15.4	4.7
E	Tu	5	2:34	9:16	15:30	21:55
			16.2	1.9	16.5	3.3
	W	6	3:40	10:13	16:26	22:46
			17.4	0.6	17.5	2.0
	Th	7	4:35	11:03	17:13	23:32
			18.6	—0.5	18.9	0.9
	F	8	5:22	11:48	17:55	. . .
			19.5	—1.0	19.6	. . .
●	S	9	0:13	6:06	12:30	18:31
			0.2	19.9	—1.0	19.9
	☉	10	0:53	6:45	13:10	19:06
			0.0	19.9	—0.5	19.8
	M	11	1:39	7:23	13:46	19:40
			0.2	19.5	0.5	19.4
8	Tu	12	2:05	8:00	14:21	20:13
			0.7	18.8	1.7	18.7
	W	13	2:41	8:36	14:54	20:45
			1.4	17.9	3.0	17.9
	Th	14	3:20	9:15	15:30	21:21
			2.2	17.0	4.3	17.2
	F	15	4:08	9:57	16:10	22:05
			3.0	16.1	5.3	16.3
A	S	16	4:55	10:50	17:05	22:58
☽			3.7	15.2	6.1	15.6
	☉	17	5:57	11:53	18:20	. . .
			4.2	14.6	6.4	. . .
	M	18	0:03	7:04	13:05	19:38
			15.2	4.1	14.6	6.0
	Tu	19	1:15	8:08	14:13	20:44
			15.3	3.5	15.1	5.1
E	W	20	2:25	9:08	15:12	21:38
			16.0	2.7	16.1	4.0
	Th	21	3:23	9:58	16:02	22:28
			16.8	1.7	17.3	2.8
	F	22	4:15	10:45	16:46	23:12
			17.7	0.9	18.5	1.8
	S	23	5:00	11:28	17:28	23:53
			18.5	0.3	19.4	1.0
○	☉	24	5:43	12:09	18:07	. . .
			19.1	0.1	19.9	. . .
	M	25	0:32	6:25	12:47	18:46
			0.6	19.5	0.3	20.1
N	Tu	26	1:12	7:07	13:27	19:24
			0.4	19.5	0.8	19.9
	W	27	1:51	7:48	14:07	20:03
			0.5	19.2	1.5	19.5
P	Th	28	2:35	8:32	14:48	20:48
			0.9	18.6	2.5	18.8
	F	29	3:23	9:20	15:38	21:34
			1.4	17.8	3.5	18.0
	S	30	4:17	10:17	16:37	22:30
			2.0	17.0	4.5	17.0

DECEMBER.

Moon	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	☉	1	5:18	11:22	17:48	23:35
			2.5	16.2	5.1	16.4
	M	2	6:27	12:35	19:07	. . .
			2.7	15.7	5.1	. . .
E	Tu	3	0:48	7:37	13:50	20:18
			16.2	2.4	15.7	4.6
	W	4	2:01	8:44	14:58	21:22
			16.4	2.0	16.2	3.7
	Th	5	3:08	9:43	15:57	22:18
			17.0	1.3	17.0	2.8
	F	6	4:07	10:38	16:47	23:08
			17.6	0.8	17.8	1.8
	S	7	5:00	11:27	17:30	23:53
			18.2	0.5	18.5	1.2
●	☉	8	5:47	12:12	18:10	. . .
			18.4	0.6	18.8	. . .
S	M	9	0:35	6:30	12:58	18:47
			0.9	18.5	1.0	18.8
	Tu	10	1:14	7:08	13:30	19:22
			0.8	18.2	1.6	18.7
	W	11	1:52	7:45	14:05	19:54
			1.0	17.8	2.4	18.4
	Th	12	2:27	8:20	14:37	20:25
			1.3	17.3	3.3	18.1
	F	13	3:08	8:57	15:08	21:00
			1.8	16.9	4.1	17.8
A	S	14	3:42	9:35	15:44	21:40
			2.2	16.5	4.6	17.4
	☉	15	4:25	10:18	16:25	22:25
			2.6	16.2	5.1	17.0
☽	M	16	5:14	11:08	17:18	23:17
			3.0	16.0	5.4	16.5
E	Tu	17	6:08	12:06	18:22	. . .
			3.3	15.8	5.5	. . .
	W	18	0:17	7:07	13:07	19:32
			16.8	3.3	15.9	5.2
	Th	19	1:20	8:07	14:10	20:40
			16.2	3.1	16.3	4.5
	F	20	2:26	9:08	15:10	21:42
			16.4	2.6	17.0	3.6
	S	21	3:29	10:03	16:05	22:37
			17.0	2.0	17.8	2.6
	☉	22	4:27	10:57	16:57	23:25
			17.6	1.4	18.7	1.6
	M	23	5:20	11:48	17:45	. . .
			18.3	1.0	19.2	. . .
N	Tu	24	0:16	6:10	12:36	18:30
○			0.8	18.9	0.8	19.7
	W	25	1:00	6:58	13:20	19:15
			0.2	19.1	0.9	19.9
P	Th	26	1:46	7:43	14:03	19:57
			—0.1	19.1	1.3	19.8
	F	27	2:30	8:30	14:48	20:43
			—0.1	18.9	1.8	19.5
	S	28	3:18	9:19	15:37	21:28
			0.0	18.5	2.5	19.0
	☉	29	4:07	10:10	16:27	22:20
			0.5	17.9	3.3	18.4
E	M	30	5:01	11:05	17:25	23:15
☾			1.0	17.2	4.0	17.6
	Tu	31	5:59	12:05	18:30	. . .
			1.7	16.5	4.4	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 10 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:40 4.1	9:20 13.8	15:24 2.8	22:01 14.0
	Tu	2	3:50 3.3	10:25 14.6	16:25 2.4	22:58 14.9
	W	3	4:58 2.3	11:25 15.4	17:22 1.9	23:50 15.9
N ○ P	Th	4	5:49 1.2	12:19 16.1	18:15 1.3	. . . . .
	F	5	0:40 16.7	6:41 0.3	13:10 16.7	19:06 0.9
	S	6	1:28 17.3	7:30 —0.4	14:00 17.0	19:53 0.7
	S	7	2:15 17.6	8:20 —0.8	14:48 17.0	20:41 0.9
	M	8	3:01 17.5	9:08 —0.7	15:37 16.8	21:28 1.2
	Tu	9	3:50 17.0	9:57 —0.3	16:27 16.3	22:17 1.8
E	W	10	4:38 16.4	10:45 0.3	17:18 15.6	23:07 2.6
☾	Th	11	5:30 15.5	11:37 1.2	18:12 14.8	. . . . .
	F	12	0:00 3.5	6:24 14.6	12:30 2.1	19:08 14.1
	S	13	0:58 4.2	7:23 13.9	13:30 2.9	20:08 13.6
	S	14	2:02 4.7	8:25 13.5	14:31 3.5	21:08 13.3
	M	15	3:09 4.8	9:27 13.4	15:34 3.6	22:04 13.5
	Tu	16	4:09 4.4	10:25 13.6	16:32 3.5	22:56 13.8
S	W	17	5:00 3.8	11:17 14.1	17:22 3.3	23:42 14.4
A	Th	18	5:48 3.1	12:03 14.6	18:06 2.9	. . . . .
●	F	19	0:23 14.9	6:22 2.3	12:47 15.0	18:44 2.7
	S	20	1:02 15.3	6:59 1.6	13:27 15.4	19:18 2.5
	S	21	1:38 15.6	7:35 1.0	14:06 15.6	19:52 2.4
	M	22	2:10 15.8	8:11 0.5	14:42 15.6	20:22 2.3
	Tu	23	2:44 15.7	8:48 0.3	15:18 15.4	20:52 2.3
E	W	24	3:18 15.5	9:26 0.3	15:55 15.0	21:25 2.3
	Th	25	3:53 15.2	10:05 0.6	16:33 14.5	22:01 2.5
	F	26	4:33 14.7	10:47 1.2	17:17 13.9	22:43 2.9
☽	S	27	5:20 14.1	11:33 2.0	18:07 13.3	23:34 3.4
	S	28	6:18 13.4	12:28 2.8	19:08 12.7	. . . . .
	M	29	0:40 4.0	7:38 13.0	13:35 3.6	20:22 12.7
	Tu	30	2:02 4.2	8:53 13.1	14:54 3.8	21:36 13.4
N	W	31	3:28 3.8	10:10 13.9	16:08 3.5	22:40 14.5

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:40 2.7	11:13 14.8	17:12 2.6	23:31 15.7
P	F	2	5:40 1.3	12:08 15.9	18:07 1.6	. . . . .
○	S	3	0:27 16.9	6:32 0.1	12:58 16.8	18:57 0.8
	S	4	1:13 17.8	7:19 —0.9	13:45 17.5	19:41 0.3
	M	5	2:00 18.3	8:04 —1.4	14:30 17.7	20:25 0.2
E	Tu	6	2:42 18.3	8:48 —1.5	15:13 17.6	21:07 0.4
	W	7	3:26 17.9	9:32 —1.1	15:58 17.0	21:48 1.1
	Th	8	4:08 17.0	10:15 —0.2	16:43 16.1	22:30 2.0
	F	9	4:53 16.9	11:00 0.9	17:31 15.0	23:15 3.0
☾	S	10	5:42 14.6	11:47 2.2	18:24 13.9	. . . . .
	S	11	0:04 4.1	6:38 13.6	12:42 3.3	19:25 13.0
	M	12	1:05 4.9	7:45 12.9	13:47 4.3	20:28 12.5
S	Tu	13	2:17 5.3	8:54 12.6	14:57 4.7	21:33 12.6
A	W	14	3:30 5.1	9:59 12.9	16:07 4.6	22:29 13.0
	Th	15	4:32 4.3	10:55 13.4	17:04 4.2	23:17 13.8
	F	16	5:20 3.3	11:44 14.2	17:50 3.5	23:59 14.7
	S	17	6:00 2.3	12:27 15.0	18:25 2.9	. . . . .
●	S	18	0:37 15.5	6:38 1.3	13:06 15.6	18:57 2.4
	M	19	1:13 16.1	7:13 0.4	13:42 16.0	19:27 2.0
	Tu	20	1:47 16.5	7:49 —0.3	14:17 16.1	19:58 1.6
E	W	21	2:20 16.6	8:24 —0.5	14:50 16.0	20:27 1.4
	Th	22	2:53 16.4	9:00 —0.3	15:23 15.7	21:00 1.4
	F	23	3:29 16.0	9:37 0.2	16:00 15.1	21:35 1.6
	S	24	4:08 15.3	10:17 1.0	16:39 14.3	22:17 2.2
☽	S	25	4:53 14.5	11:00 2.0	17:27 13.4	23:08 3.0
	M	26	5:53 13.4	11:54 3.2	18:32 12.5	. . . . .
N	Tu	27	0:14 3.8	7:12 12.7	13:05 4.3	19:55 12.4
	W	28	1:44 4.3	8:40 12.8	14:37 4.7	21:18 13.1
	Th	29	3:15 4.0	9:58 13.5	15:59 4.1	22:23 14.3

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:29 2.7	11:01 14.7	17:05 2.9	23:20 15.7
	S	2	5:27 1.3	11:53 15.9	17:57 1.7	. . . . .
○	S	3	0:10 17.0	6:17 —1.0	12:41 17.0	18:42 0.7
E	M	4	0:55 18.0	7:01 —1.0	13:25 17.8	19:23 0.0
	Tu	5	1:38 18.5	7:43 —1.6	14:07 18.0	20:02 —0.1
	W	6	2:19 18.5	8:23 —1.6	14:47 17.8	20:40 0.1
	Th	7	2:59 18.0	9:02 —1.1	15:28 17.1	21:17 0.8
	F	8	3:39 17.1	9:42 —0.2	16:08 16.1	21:55 1.6
	S	9	4:20 15.8	10:23 1.1	16:51 14.9	22:35 2.7
☾	S	10	5:07 14.5	11:06 2.4	17:40 13.6	23:18 3.8
S	M	11	6:00 13.3	11:57 3.8	18:37 12.5	. . . . .
	Tu	12	0:13 4.7	7:05 12.5	13:01 4.9	19:48 12.0
A	W	13	1:28 5.3	8:22 12.2	14:20 5.5	20:55 12.0
	Th	14	2:47 5.2	9:31 12.5	15:47 5.3	21:56 12.6
	F	15	3:55 4.3	10:29 13.2	16:37 4.7	22:45 13.6
	S	16	4:47 3.2	11:17 14.0	17:21 3.8	23:31 14.7
	S	17	5:31 2.0	11:59 15.0	17:57 3.0	. . . . .
●	M	18	0:08 15.7	6:09 0.9	12:37 15.8	18:28 2.2
E	Tu	19	0:45 16.5	6:45 0.0	13:12 16.3	18:58 1.5
	W	20	1:19 17.0	7:22 —0.5	13:47 16.5	19:30 1.0
	Th	21	1:53 17.1	7:57 —0.7	14:20 16.4	20:03 0.8
	F	22	2:30 16.9	8:33 —0.4	14:55 16.0	20:39 0.8
	S	23	3:09 16.3	9:10 0.3	15:32 15.3	21:17 1.2
	S	24	3:51 15.5	9:51 1.3	16:13 14.4	22:12 1.9
	M	25	4:40 14.4	10:37 2.5	17:06 13.4	22:55 2.8
N ☽	Tu	26	5:43 13.3	11:33 3.8	18:14 12.6	. . . . .
	W	27	0:07 3.8	7:06 12.7	12:53 4.8	19:40 12.5
P	Th	28	1:38 4.2	8:38 12.9	14:29 4.9	21:00 13.3
	F	29	3:03 3.6	9:45 13.6	15:50 4.1	22:05 14.4
	S	30	4:13 2.4	10:43 14.6	16:50 2.9	22:59 15.8
	S	31	5:08 1.1	11:28 15.8	17:38 1.7	23:47 16.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	5:55	12:17	18:20	. . .
			0.0	17.0	0.7	. . .
	Tu	2	0:31	6:37	13:00	18:59
			17.8	—0.8	17.6	0.2
	W	3	1:12	7:16	13:40	19:35
			18.2	—1.1	17.8	0.1
	Th	4	1:53	7:55	14:19	20:11
			18.1	—1.0	17.5	0.3
	F	5	2:32	8:33	14:57	20:48
			17.5	—0.5	16.8	0.8
	S	6	3:12	9:11	15:36	21:23
			16.6	0.5	15.8	1.6
	S	7	3:52	9:50	16:15	22:02
			15.5	1.6	14.6	2.5
S	M	8	4:37	10:32	17:01	22:46
			14.3	2.9	13.4	3.4
☾	Tu	9	5:30	11:19	17:55	23:38
			13.3	4.2	12.4	4.2
A	W	10	6:34	12:18	19:00	. . .
			12.5	5.2	11.9	. . .
	Th	11	0:47	7:49	13:35	20:12
			4.8	12.3	5.8	12.0
	F	12	2:05	8:55	14:51	21:13
			4.7	12.5	5.7	12.6
	S	13	3:10	9:51	15:58	22:05
			4.0	13.0	5.0	13.6
	S	14	4:05	10:40	16:40	22:51
			3.0	13.8	4.1	14.6
E	M	15	4:52	11:24	17:17	23:32
			1.9	14.9	3.1	15.6
	Tu	16	5:34	12:03	17:51	. . .
			0.9	15.7	2.1	. . .
●	W	17	0:12	6:13	12:42	18:27
			16.5	0.1	16.3	1.3
	Th	18	0:50	6:52	13:17	19:03
			17.0	—0.3	16.5	0.7
	F	19	1:30	7:30	13:58	19:42
			17.1	—0.3	16.5	0.4
	S	20	2:10	8:10	14:32	20:22
			16.9	0.1	16.0	0.5
	S	21	2:54	8:50	15.14	21:08
			16.2	0.8	15.4	1.0
N P	M	22	3:42	9:35	16:01	21:58
			15.4	1.8	14.6	1.7
	Tu	23	4:37	10:27	16:57	22:57
			14.4	3.0	13.7	2.6
☽	W	24	5:45	11:30	18:07	. . .
			13.5	4.1	13.2	. . .
	Th	25	0:10	7:01	12:50	19:25
			3.3	13.2	4.8	13.2
	F	26	1:30	8:17	14:16	20:37
			3.5	13.4	4.7	13.8
	S	27	2:44	9:20	15:29	21:38
			3.0	13.8	3.9	14.7
E	S	28	3:48	10:15	16:25	22:32
			2.2	14.7	3.0	15.6
	M	29	4:42	11:05	17:12	23:20
			1.2	15.6	2.1	16.4
	Tu	30	5:27	11:50	17:55	. . .
			0.5	16.4	1.3	. . .

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	0:05	6:10	12:33	18.32
			17.0	0.0	17.0	0.9
	Th	2	0:47	6:50	13:12	19:10
			17.2	—0.2	17.1	0.8
	F	3	1:30	7:28	13:52	19:45
			17.1	0.0	16.8	0.9
	S	4	2:08	8:05	14:30	20:22
			16.7	0.5	16.2	1.2
S	S	5	2:48	8:44	15:06	21:00
			16.0	1.3	15.4	1.7
	M	6	3:30	9:22	15:48	21:38
			15.1	2.3	14.4	2.3
A	Tu	7	4:17	10:02	16:30	22:23
			14.3	3.3	13.5	2.9
	W	8	5:07	10:47	17:18	23:14
			13.4	4.3	12.7	3.5
☾	Th	9	6:05	11:38	18:15	. . .
			12.8	5.1	12.3	. . .
	F	10	0:12	7:10	12:42	19:18
			3.8	12.6	5.5	12.3
	S	11	1:18	8:13	13:50	20:20
			3.8	12.7	5.5	12.8
	S	12	2:21	9:10	14:52	21:17
			3.5	13.2	5.0	13.5
E	M	13	3:19	10:00	15:45	22:08
			2.8	13.8	4.2	14.4
	Tu	14	4:10	10:45	16:30	22:55
			2.0	14.6	3.2	15.3
	W	15	4:55	11:28	17:15	23:40
			1.2	15.4	2.2	16.0
●	Th	16	5:41	12:10	17:58	. .
			0.7	16.0	1.3	. . .
	F	17	0:25	6:24	12:50	18:41
			16.5	0.4	16.3	0.7
	S	18	1:10	7:08	13:32	19:26
			16.7	0.4	16.4	0.4
N P	S	19	1:57	7:52	14:15	20:13
			16.6	0.7	16.2	0.3
	M	20	2:45	8:38	15:03	21:03
			16.2	1.3	15.8	0.7
	Tu	21	3:37	9:28	15:54	21:58
			15.5	2.1	15.2	1.2
	W	22	4:35	10:23	16:51	22:57
			14.8	3.0	14.7	1.8
☽	Th	23	5:38	11:26	17:55	. . .
			14.3	3.7	14.2	. . .
	F	24	0:02	6:45	12:37	19:02
			2.3	14.0	4.2	14.2
E	S	25	1:10	7:51	13:48	20:07
			2.5	14.0	4.2	14.3
	S	26	2:17	8:51	14:57	21:07
			2.5	14.1	3.8	14.7
	M	27	3:15	9:44	15:53	22:02
			2.2	14.5	3.3	15.1
	Tu	28	4:10	10:36	16:43	22:52
			1.8	15.1	2.8	15.5
	W	29	4:58	11:22	17:27	23:40
			1.4	15.7	2.3	15.9
○	Th	30	5:43	12:07	18:07	. . .
			1.2	16.1	1.9	. . .
	F	31	0:24	6:25	12:49	18:45
			16.1	1.1	16.2	1.6

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	1:07	7:05	13:29	19:24
			16.0	1.3	16.0	1.5
	S	2	1:49	7:43	14:07	20:01
			15.9	1.6	15.7	1.5
	M	3	2:30	8:21	14:45	20:40
			15.5	2.1	15.2	1.7
A	Tu	4	3:12	9:00	15:23	21:20
			15.0	2.7	14.5	1.5
	W	5	3:57	9:38	16:02	22:08
			14.4	3.4	13.9	2.2
	Th	6	4:43	10:16	16:44	22:50
			13.8	4.0	13.4	2.5
	F	7	5:33	11:00	17:32	23:40
			13.4	4.5	13.0	2.7
☾	S	8	6:27	11:47	18:25	. . .
			13.1	4.8	12.9	. . .
E	S	9	0:34	7:22	12:44	19:24
			2.9	13.0	4.9	13.0
	M	10	1:32	8:18	13:46	20:24
			2.9	13.1	4.7	13.4
	Tu	11	2:30	9:13	14:48	21:22
			2.7	13.5	4.2	14.0
	W	12	3:27	10:04	15:48	22:19
			2.4	14.1	3.4	14.7
	Th	13	4:20	10:58	16:42	23:12
			2.0	14.8	2.5	15.3
	F	14	5:12	11:42	17:35	. . .
			1.5	15.5	1.6	. . .
● N	S	15	0:05	6:02	12:28	18:26
			16.0	1.2	16.1	0.8
P	S	16	0:56	6:51	13:16	19:17
			16.3	1.1	16.5	0.3
	M	17	1:47	7:40	14:03	20:07
			16.5	1.1	16.7	0.0
	Tu	18	2:38	8:29	14:53	20:59
			16.4	1.3	16.5	0.0
	W	19	3:20	9:20	15:44	21:51
			16.1	1.8	16.2	0.3
	Th	20	4:24	10:13	16:37	22:46
			15.7	2.3	15.8	0.7
☽	F	21	5:21	11:10	17:33	23:42
			15.2	2.9	15.3	1.3
E	S	22	6:20	12:09	18:32	. . .
			14.8	3.5	14.9	. . .
	S	23	0:40	7:20	13:12	19:33
			1.8	14.3	3.9	14.5
	M	24	1:40	8:17	14:17	20:32
			2.3	14.2	4.0	14.3
	Tu	25	2:40	9:13	15:17	21:30
			2.5	14.1	4.0	14.3
	W	26	3:37	10:06	16:12	22:25
			2.6	14.4	3.6	14.6
	Th	27	4:31	10:57	17:03	23:16
			2.5	14.7	3.2	14.8
	F	28	5:20	11:43	17:46	. . .
			2.4	15.1	2.7	. . .
S ○	S	29	0:04	6:05	12:27	18:27
			15.1	2.3	15.3	2.2
	S	30	0:50	6:47	13:08	19:05
			15.3	2.2	15.5	1.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:32	7:25	13:47	19:43
			15.4	2.4	15.5	1.5
A	Tu	2	2:13	8:02	14:22	20:21
			15.3	2.5	15.3	1.3
	W	3	2:53	8:37	14:58	21:00
			15.1	2.8	15.0	1.2
	Th	4	3:34	9:10	15:35	21:39
			14.9	3.0	14.7	1.2
	F	5	4:13	9:44	16:12	22:20
			14.5	3.3	14.3	1.4
E	S	6	4:57	10:20	16:51	23:05
			14.1	3.5	14.0	1.5
☾	S	7	5:40	11:01	17:37	23:51
			13.6	3.8	13.6	2.1
	M	8	6:30	11:50	18:32	. . .
			13.2	4.0	13.6	. . .
	Tu	9	0:43	7:24	12:48	19:35
			2.6	13.0	4.1	13.2
	W	10	1:41	8:24	13:58	20:45
			3.0	13.0	4.1	13.5
	Th	11	2:45	9:27	15:12	21:51
			3.1	13.5	3.7	14.0
	F	12	3:50	10:27	16:18	22:55
			2.9	14.3	2.8	14.7
N	S	13	4:51	11:22	17:20	23:52
			2.5	15.2	1.8	15.5
●	S	14	5:48	12:13	18:14	. . .
			2.0	16.1	0.8	. . .
P	M	15	0:47	6:40	13:08	19:07
			16.2	1.4	16.9	−0.1
	Tu	16	1:37	7:29	13:52	19:56
			16.7	1.0	17.4	−0.7
	W	17	2:25	8:17	14:38	20:45
			17.0	0.9	17.6	−0.9
	Th	18	3:15	9:05	15:25	21:34
			16.9	1.0	17.4	−0.7
E	F	19	4:03	9:52	16:15	22:22
			16.6	1.5	16.8	−0.2
	S	20	4:53	10:42	17:05	23:13
			16.0	2.1	16.0	0.6
☽	S	21	5:46	11:32	17:57	. . .
			15.2	2.9	15.2	. . .
	M	22	0:05	6:40	12:28	18:56
			1.6	14.5	3.7	14.4
	Tu	23	1:01	7:40	13:30	19:58
			2.5	13.9	4.3	13.8
	W	24	2:05	8:40	14:37	21:01
			3.2	13.5	4.6	13.5
	Th	25	3:07	9:38	15:43	22:02
			3.6	13.5	4.4	13.6
S	F	26	4:08	10:33	16:38	22:57
			3.6	13.8	3.9	14.0
	S	27	5:04	11:28	17:27	23:48
			3.4	14.3	3.2	14.5
	S	28	5:50	12:07	18:10	. . .
			3.1	14.8	2.4	. . .
○ A	M	29	0:32	6:32	12:46	18:47
			15.0	2.8	15.3	1.7
	Tu	30	1:14	7:07	13:25	19:23
			15.3	2.6	15.6	1.1
	W	31	1:52	7:40	13:58	19:58
			15.5	2.5	15.8	0.6

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:29	8:11	14:32	20:35
			15.6	2.4	15.8	0.4
E	F	2	3:04	8:40	15:05	21:10
			15.4	2.4	15.6	0.4
	S	3	3:39	9:10	15:38	21:47
			15.1	2.4	15.2	0.7
	S	4	4:16	9:43	16:15	22:27
			14.6	2.5	14.8	1.2
	M	5	4:53	10:23	16:56	23:10
			14.0	2.8	14.2	1.8
☾	Tu	6	5:38	11:09	17:48	. . .
			13.4	3.2	13.6	. . .
	W	7	0:00	6:34	12:07	18:57
			2.7	12.8	3.7	13.0
	Th	8	1:00	7:43	13:22	20:17
			3.5	12.5	4.1	12.9
N	F	9	2:15	8:59	14:48	21:35
			4.0	13.0	4.0	13.4
	S	10	3:38	10:08	16:05	22:44
			3.9	13.9	3.1	14.3
	S	11	4:40	11:07	17:09	23:42
			3.2	15.1	1.9	15.4
P ●	M	12	5:38	12:00	18:04	. . .
			2.2	16.4	0.5	. . .
	Tu	13	0:38	6:29	12:49	18:53
			16.4	1.3	17.5	−0.6
	W	14	1:20	7:15	13:34	19:40
			17.2	0.5	18.1	−0.8
E	Th	15	2:07	8:00	14:19	20:05
			17.6	0.2	18.4	−1.5
	F	16	2:50	8:42	15:02	21:08
			17.6	0.3	18.1	−1.2
	S	17	3:35	9:25	15:47	21:53
			17.2	0.7	17.4	−0.5
	S	18	4:20	10:08	16:32	22:38
			16.4	1.5	16.8	0.6
☽	M	19	5:10	10:55	17:22	23:28
			15.3	2.5	15.1	1.8
	Tu	20	6:01	11:45	18:18	. . .
			14.2	3.6	14.0	. . .
	W	21	0:22	7:01	12:45	19:24
			3.1	13.3	4.5	13.2
S	Th	22	1:26	8:06	13:58	20:33
			4.1	12.8	5.0	12.9
	F	23	2:38	9:10	15:12	21:40
			4.6	12.8	4.9	13.0
	S	24	3:50	10:08	16:15	22:38
			4.6	13.1	4.2	13.5
A	S	25	4:48	11:00	17:05	23:27
			4.1	13.9	3.8	14.2
	M	26	5:34	11:44	17:47	. . .
			3.6	14.7	2.3	. . .
○	Tu	27	0:10	6:12	12:24	18:23
			14.9	3.0	15.4	1.4
	W	28	0:50	6:43	12:58	18:58
			15.5	2.5	16.0	0.6
	Th	29	1:27	7:12	13:30	19:32
			15.9	2.1	16.4	0.0
E	F	30	2:00	7:40	14:02	20:05
			16.0	1.9	16.5	−0.2
	S	31	2:32	8:09	14:35	20:40
			15.9	1.6	16.3	−0.1

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	3:03	8:40	15:09	21:15
			15.6	1.5	15.9	0.3
	M	2	3:37	9:13	15:45	21:52
			15.0	1.7	15.3	1.0
	Tu	3	4:13	9:52	16:27	22:35
			14.3	2.1	14.5	2.0
☾	W	4	4:57	10:41	17:22	23:24
			13.5	2.7	13.5	3.1
	Th	5	5:55	11:42	18:37	. . .
			12.6	3.6	12.7	. . .
N	F	6	0:29	7:16	13:08	20:05
			4.2	12.2	4.2	12.6
	S	7	1:58	8:41	14:38	21:27
			4.8	12.8	4.1	13.2
	S	8	3:23	9:58	15:55	22:33
			4.5	13.9	3.0	14.3
P	M	9	4:33	10:52	16:57	23:27
			3.4	15.3	1.6	15.5
	Tu	10	5:28	11:42	17:48	. . .
			2.1	16.7	0.2	. . .
●	W	11	0:15	6:15	12:28	18:35
			16.7	1.0	17.8	−0.9
E	Th	12	1:00	6:56	13:13	19:17
			17.6	0.1	18.5	−1.5
	F	13	1:41	7:36	13:55	19:58
			18.0	−0.2	18.6	−1.6
	S	14	2:23	8:15	14:36	20:40
			17.9	−0.1	18.2	−1.2
	S	15	3:05	8:55	15:18	21:21
			17.4	0.4	17.4	−0.3
	M	16	3:47	9:35	16:02	22:04
			16.4	1.3	16.2	0.9
	Tu	17	4:31	10:18	16:50	22:50
			15.2	2.3	14.9	2.3
☽ S	W	18	5:20	11:06	17:45	23:44
			13.9	3.5	13.6	3.6
	Th	19	6:20	12:06	18:53	. . .
			12.9	4.5	12.8	. . .
	F	20	0:50	7:30	13:18	20:07
			4.8	12.3	5.1	12.5
A	S	21	2:09	8:38	14:36	21:15
			5.3	12.3	4.9	12.7
	S	22	3:27	9:38	15:42	22:12
			5.2	12.8	4.2	13.3
	M	23	4:25	10:29	16:33	23:00
			4.6	13.7	3.2	13.9
	Tu	24	5:07	11:12	17:15	23:40
			3.8	14.6	2.1	14.7
	W	25	5:42	11:50	17:52	. . .
			3.1	15.5	1.1	. . .
E ○	Th	26	0:20	6:12	12:26	18:26
			15.6	2.3	16.2	0.3
	F	27	0:54	6:40	13:00	19:01
			16.1	1.8	16.7	−0.2
	S	28	1:27	7:10	13:33	19:35
			16.3	1.3	16.8	−0.4
	S	29	1:59	7:40	14:08	20:10
			16.2	0.9	16.7	−0.1
	M	30	2:31	8:15	14:45	20:46
			15.8	0.9	16.2	0.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	3:06	8:52	15:25	21:24
			15.2	1.1	15.5	1.3
	W	2	3:45	9:35	16:12	22:08
			14.4	1.7	14.5	2.4
N	Th	3	4:30	10:28	17:12	23:00
☾			13.5	2.6	13.4	3.6
	F	4	5:36	11:34	18:31	. . .
			12.6	3.5	12.6	. . .
	S	5	0:13	7:02	13:00	19:58
			4.8	12.4	4.1	12.7
	S	6	1:50	8:25	14:28	21:15
			5.1	13.0	3.7	13.4
P	M	7	3:15	9:35	15:41	22:13
			4.5	14.2	2.6	14.5
	Tu	8	4:20	10:31	16:40	23:05
			3.3	15.5	1.4	15.5
E	W	9	5:10	11:20	17:28	23:50
			2.0	16.7	0.2	16.6
●	Th	10	5:53	12:05	18:10	. . .
			1.0	17.6	—0.7	. . .
	F	11	0:35	6:33	12:50	18:52
			17.6	0.2	18.2	—1.1
	S	12	1:15	7:12	13:30	19:32
			17.9	0.0	18.2	—1.1
	S	13	1:56	7:50	14:10	20:11
			17.7	0.0	17.7	—0.6
	M	14	2:36	8:27	14:52	20:52
			17.1	0.5	16.9	0.3
	Tu	15	3:16	9:07	15:35	21:33
			16.1	1.3	15.8	1.5
S	W	16	3:58	9:48	16:22	22:17
			15.0	2.2	14.6	2.8
	Th	17	4:50	10:35	17:17	23:07
			13.8	3.2	13.5	4.1
☽	F	18	5:41	11:31	18:28	. . .
			12.8	4.0	12.8	. . .
A	S	19	0:10	6:50	12:40	19:35
			5.1	12.2	4.6	12.5
	S	20	1:28	7:56	13:52	20:42
			5.7	12.2	4.6	12.4
	M	21	2:47	8:57	14:58	21:35
			5.5	12.7	4.0	13.0
	Tu	22	3:43	9:48	15:51	22:22
			5.0	13.5	3.1	13.7
E	W	23	4:27	10:34	16:36	23:07
			4.2	14.5	2.1	14.6
	Th	24	5:02	11:15	17:17	23:45
			3.3	15.4	1.2	15.5
	F	25	5:34	11:53	17:53	. . .
			2.5	16.1	0.5	. . .
○	S	26	0:22	6:07	12:30	18:30
			16.1	1.2	16.6	0.0
	S	27	0:57	6:41	13:08	19:07
			16.3	1.0	16.8	0.0
	M	28	1:31	7:18	13:47	19:45
			16.2	0.6	16.7	0.3
	Tu	29	2:07	7:58	14:30	20:24
			16.0	0.5	16.2	0.9
N	W	30	2:47	8:41	15:17	21:07
			15.4	0.9	15.4	1.3
	Th	31	3:30	9:30	16:08	21:53
			14.6	1.5	14.5	2.8
NOVEMBER.						
	F	1	4:23	10:26	17:11	22:51
			13.8	2.3	13.6	3.9
☾	S	2	5:30	11:34	18:26	. . .
			13.1	3.0	13.1	. . .
	S	3	0:08	6:47	12:52	19:45
			4.8	13.0	3.4	13.1
	M	4	1:35	8:02	14:10	20:52
			4.9	13.6	3.1	13.5
E	Tu	5	2:55	9:08	15:17	21:46
			4.3	14.4	2.4	14.3
	W	6	3:55	10:05	16:13	22:38
			3.3	15.4	1.5	15.3
	Th	7	4:46	10:56	17:02	23:27
			2.3	16.2	0.7	16.4
	F	8	5:30	11:42	17:47	. . .
			1.5	16.9	0.1	. . .
●	S	9	0:10	6:10	12:27	18:28
			17.0	0.9	17.3	—0.2
	S	10	0:51	6:48	13:09	19:08
			17.3	0.6	17.3	—0.1
	M	11	1:32	7:27	13:50	19:48
			17.1	0.6	17.0	0.4
S	Tu	12	2:10	8:05	14:32	20:27
			16.6	0.8	16.3	1.1
	W	13	2:50	8:45	15:15	21:07
			15.9	1.3	15.5	2.0
	Th	14	3:32	9:27	16:01	21:50
			14.9	2.0	14.6	3.0
	F	15	4:16	10:12	16:52	22:35
			14.0	2.6	13.7	4.1
A	S	16	5:05	11:02	17:50	23:28
☽			13.1	3.3	13.1	5.0
	S	17	6:00	12:00	18:55	. . .
			12.5	3.7	12.7	. . .
	M	18	0:28	7:02	13:03	19:55
			5.5	12.4	3.8	12.7
	Tu	19	1:36	8:08	14:04	20:52
			5.6	12.7	3.6	13.0
E	W	20	2:37	9:00	15:00	21:43
			5.3	13.3	3.1	13.6
	Th	21	3:28	9:50	15:51	22:27
			4.6	14.0	2.4	14.3
	F	22	4:14	10:37	16:37	23:10
			3.7	14.8	1.7	15.0
	S	23	4:55	11:21	17:20	23:50
			2.7	15.5	1.1	15.6
○	S	24	5:40	12:05	18:03	. . .
			1.8	16.1	0.7	. . .
	M	25	0:30	6:20	12:50	18:45
			16.0	1.0	16.5	0.7
N	Tu	26	1:10	7:08	13:34	19:28
			16.2	0.5	16.5	0.8
	W	27	1:52	7:50	14:20	20:12
			16.2	0.3	16.2	1.3
P	Th	28	2:35	8:37	15:10	21:00
			15.9	0.4	15.6	1.9
	F	29	3:25	9:30	16:04	21:49
			15.4	0.9	15.5	2.8
	S	30	4:18	10:25	17:05	22:48
			14.8	1.5	14.4	3.5
DECEMBER.						
☾	S	1	5:18	11:27	18:10	23:58
			14.3	2.1	13.9	4.1
	M	2	6:23	12:33	19:17	. . .
			14.0	2.4	13.8	. . .
E	Tu	3	1:05	7:32	13:40	20:20
			4.4	14.1	2.6	14.0
	W	4	2:18	8:36	14:45	21:18
			4.2	14.4	2.4	14.4
	Th	5	3:23	9:35	15:43	22:10
			3.7	14.8	2.1	14.8
	F	6	4:18	10:30	16:36	23:00
			3.0	15.3	1.7	15.5
	S	7	5:06	11:20	17:24	23:47
			2.4	15.8	1.3	16.1
●	S	8	5:50	12:06	18:08	. . .
			1.8	16.1	1.1	. . .
S	M	9	0:31	6:30	12:50	18:50
			16.4	1.4	16.3	1.1
	Tu	10	1:12	7:10	13:34	19:30
			16.4	1.2	16.2	1.3
	W	11	1:53	7:48	14:17	20:09
			16.2	1.1	16.0	1.8
	Th	12	2:31	8:28	14:59	20:48
			15.8	1.2	15.5	2.3
	F	13	3:10	9:08	15:42	21:24
			15.2	1.4	14.9	3.0
A	S	14	3:49	9:51	16:27	22:02
			14.5	1.8	14.3	3.6
	S	15	4:30	10:33	17:15	22:43
			13.8	2.2	13.7	4.3
☽	M	16	5:13	11:20	18:05	23:25
			13.3	2.5	13.2	4.7
E	Tu	17	6:02	12:10	18:59	. . .
			12.9	2.9	12.9	. . .
	W	18	0:18	6:58	13:07	19:35
			5.0	12.8	3.1	12.8
	Th	19	1:16	7:58	14:05	20:50
			5.0	13.0	3.1	13.0
	F	20	2:20	8:58	15:03	21:45
			4.7	13.4	3.0	13.5
	S	21	3:24	9:58	15:59	22:35
			4.1	14.0	2.6	14.2
	S	22	4:20	10:53	16:52	23:23
			3.2	14.8	2.1	15.0
	M	23	5:15	11:45	17:42	. . .
			2.1	15.5	1.7	. . .
N	Tu	24	0:10	6:05	12:35	18:30
○			15.8	1.2	16.0	1.3
	W	25	0:55	6:56	13:25	19:17
			16.3	0.4	16.4	1.2
P	Th	26	1:42	7:45	14:14	20:04
			16.7	—0.1	16.5	1.2
	F	27	2:28	8:32	15:08	20:52
			16.8	—0.3	16.3	1.5
	S	28	3:15	9:22	15:55	21:40
			16.6	—0.2	16.0	1.9
	S	29	4:05	10:14	16:47	22:33
			16.2	0.2	15.4	2.5
E	M	30	4:58	11:08	17:43	23:28
☾			15.6	0.9	14.9	3.2
	Tu	31	5:55	12:05	18:43	. . .
			15.0	1.6	14.4	. . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 8.5 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.), and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	4:51	10:40	17:24	23:15
			3.5	19.6	2.4	18.9
	Tu	2	5:56	11:42	18:25	. . .
			2.9	19.3	2.0	. . .
	W	3	0:14	6:55	12:41	19:23
			19.3	2.0	19.7	1.6
N	Th	4	1:10	7:50	13:38	20:17
○			19.9	1.2	20.1	1.2
P	F	5	2:03	8:43	14:30	21:08
			20.4	0.5	20.4	1.0
	S	6	2:58	9:38	15:22	21:57
			20.7	0.1	20.6	1.0
	S	7	3:43	10:23	16:10	22:46
			20.9	—0.1	20.6	1.2
	M	8	4:50	11:12	17:00	23:37
			20.8	—0.1	20.3	1.6
	Tu	9	5:18	12:08	17:50	. . .
			20.6	0.2	19.9	. . .
E	W	10	0:28	6:08	12:56	18:40
			2.2	20.1	0.7	19.2
☾	Th	11	1:22	7:00	13:52	19:34
			2.8	19.4	1.4	18.5
	F	12	2:21	7:54	14:51	20:32
			3.3	18.6	2.0	17.8
	S	13	3:22	8:58	15:52	21:33
			3.7	17.9	2.4	17.2
	S	14	4:23	9:56	16:53	22:35
			3.9	17.4	2.8	17.0
	M	15	5:24	11:00	17:52	23:36
			3.7	17.2	2.8	17.0
	Tu	16	6:21	12:00	18:46	. . .
			3.4	17.2	2.8	. . .
S	W	17	0:31	7:12	12:53	19:35
			17.2	3.0	17.4	2.7
A	Th	18	1:16	7:58	13:38	20:19
			17.5	2.6	17.7	2.8
●	F	19	1:56	8:39	14:17	20:58
			17.8	2.3	17.8	2.9
	S	20	2:30	9:15	14:50	21:31
			18.2	2.1	18.2	2.2
	S	21	3:08	9:48	15:25	22:00
			18.7	2.0	18.5	2.3
	M	22	3:37	10:17	15:38	22:27
			19.2	1.8	18.8	2.3
	Tu	23	4:12	10:48	16:36	22:55
			19.7	1.7	19.1	2.2
E	W	24	4:50	11:21	17:15	23:28
			20.1	1.6	19.3	2.1
	Th	25	5:31	11:59	17:57	. . .
			20.3	1.6	19.4	. . .
	F	26	0:10	6:17	12:42	18:45
			2.1	20.2	1.9	19.3
☽	S	27	0:55	7:06	13:32	19:37
			2.3	19.8	2.3	18.9
	S	28	1:50	8:00	14:32	20:33
			2.7	19.3	3.0	18.4
	M	29	2:58	9:01	15:41	21:37
			4.0	18.7	3.4	18.1
	Tu	30	4:14	10:08	16:55	22:43
			3.9	18.4	3.4	18.2
N	W	31	5:30	11:15	18:05	23:50
			3.3	18.4	3.0	18.6

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	6:38	12:22	19:08	. . .
			2.4	18.9	2.3	. . .
P	F	2	0:52	7:37	13:24	20:05
			19.3	1.2	19.6	1.5
○	S	3	1:48	8:31	14:19	20:56
			20.1	0.2	20.3	0.9
	S	4	2:40	9:20	15:06	21:43
			20.8	—0.5	20.8	0.5
	M	5	3:28	10:07	15:56	22:30
			21.3	—0.9	21.0	0.5
E	Tu	6	4:13	10:55	16:40	23:15
			21.5	—0.9	20.8	0.9
	W	7	4:58	11:40	17:25	. . .
			21.3	—0.5	20.3	. . .
	Th	8	0:02	5:43	12:28	18:10
			1.5	20.7	0.3	19.6
	F	9	0:50	6:30	13:20	19:00
			2.3	19.9	1.3	18.7
☾	S	10	1:41	7:19	14:16	19:53
			3.2	18.9	2.3	17.8
	S	11	2:40	8:14	15:15	20:47
			3.9	17.9	3.2	17.0
	M	12	3:43	9:14	16:17	21:50
			4.3	17.0	3.8	16.5
S	Tu	13	4:47	10:20	17:20	22:56
			4.4	16.6	3.9	16.3
A	W	14	5:49	11:25	18:17	23:55
			4.0	16.6	3.7	16.6
	Th	15	6:43	12:23	19:10	. . .
			3.3	16.9	3.4	. . .
	F	16	0:47	7:32	13:12	19:54
			17.1	2.7	17.4	3.1
	S	17	1:30	8:13	13:53	20:33
			17.8	2.1	17.9	2.9
●	S	18	2:07	8:51	14:28	21:06
			18.5	1.7	18.5	2.8
	M	19	2:40	9:23	15:02	21:35
			19.2	1.4	18.9	2.8
	Tu	20	3:15	9:53	15:36	22:02
			19.8	1.2	19.3	2.7
E	W	21	3:50	10:22	16:10	22:30
			20.4	1.0	19.6	2.5
	Th	22	4:27	10:53	16:48	23:01
			20.8	1.1	19.9	2.4
	F	23	5:06	11:30	17:30	23:39
			20.9	1.3	19.9	2.5
	S	24	5:50	12:10	18:15	. . .
			20.6	1.8	19.6	. . .
☽	S	25	0:22	6:37	12:59	19:05
			2.9	20.0	2.6	18.9
	M	26	1:15	7:32	13:58	20:02
			3.5	19.1	3.5	18.2
N	Tu	27	2:24	8:32	15:12	21:07
			4.1	18.3	4.2	17.6
	W	28	3:48	9:42	16:34	22:18
			4.2	17.7	4.3	17.6
	Th	29	5:11	10:55	17:50	23:30
			3.6	17.8	3.6	18.0

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	6:22	12:06	18:54	. . .
			2.4	18.5	2.5	. . .
	S	2	0:36	7:22	13:10	19:50
			19.0	1.0	19.4	1.5
○	S	3	1:34	8:15	14:08	20:40
			20.1	—0.1	20.3	0.7
E	M	4	2:25	9:02	14:52	21:25
			20.9	—0.9	20.9	0.2
	Tu	5	3:10	9:48	15:36	22:10
			21.5	—1.2	21.0	0.2
	W	6	3:52	10:32	16:16	22:51
			21.6	—1.0	20.9	0.6
	Th	7	4:34	11:15	16:57	23:34
			21.4	—0.4	20.4	1.3
	F	8	5:17	11:57	17:39	. . .
			20.8	0.6	19.7	. . .
	S	9	0:17	5:59	12:43	18:28
			2.2	19.9	1.7	18.8
☾	S	10	1:05	6:45	13:36	19:12
			3.2	18.9	3.0	17.8
S	M	11	1:58	7:37	14:33	20:04
			4.0	17.8	4.0	16.9
	Tu	12	3:00	8:34	15:38	21:05
			4.5	16.9	4.6	16.3
A	W	13	4:07	9:37	16:52	22:09
			4.5	16.4	4.7	16.1
	Th	14	5:10	10:45	17:42	23:12
			4.1	16.4	4.4	16.5
	F	15	6:07	11:45	18:35	. . .
			3.4	16.9	3.8	. . .
	S	16	0:08	6:55	12:37	19:20
			17.2	2.6	17.5	3.2
	S	17	0:55	7:40	13:20	20:00
			18.0	1.8	18.2	2.7
●	M	18	1:35	8:18	14:00	20:35
			18.9	1.2	18.9	2.4
E	Tu	19	2:18	8:58	14:35	21:07
			19.7	0.9	19.5	2.2
	W	20	2:49	9:26	15:10	21:38
			20.4	0.7	19.9	2.0
	Th	21	3:25	9:57	15:46	22:10
			20.9	0.8	20.2	1.9
	F	22	4:04	10:30	16:24	22:42
			21.1	1.0	20.3	2.0
	S	23	4:43	11:06	17:06	23:08
			20.9	1.5	20.0	2.3
	S	24	5:27	11:47	17:50	. . .
			20.5	2.2	19.5	. . .
	M	25	0:02	6:17	12:36	18:41
			2.8	19.6	3.2	18.7
N	Tu	26	0:59	7:10	13:39	19:38
☽			3.5	18.6	4.2	17.9
	W	27	2:10	8:13	15:00	20:45
			4.1	17.8	4.8	17.3
P	Th	28	3:37	9:25	16:23	21:59
			4.1	17.3	4.6	17.3
	F	29	4:57	10:40	17:37	23:12
			3.3	17.5	3.7	17.9
	S	30	6:05	11:51	18:38	. . .
			2.1	18.3	2.6	. . .
	S	31	0:18	7:03	12:52	19:30
			18.9	0.8	19.3	1.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 10.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	1:15 19.9	7:55 −0.2	13:42 20.1	20:20 0.7
	Tu	2	2:08 20.7	8:42 −0.8	14:30 20.6	21:05 0.3
	W	3	2:47 21.1	9:25 −0.8	15:11 20.7	21:46 0.4
	Th	4	3:27 21.1	10:07 −0.4	15:50 20.5	22:25 0.9
	F	5	4:06 20.8	10:48 0.3	16:32 20.0	23:06 1.5
	S	6	4:48 20.2	11:30 1.3	17:08 19.4	23:47 2.3
	S	7	5:30 19.5	12:13 2.5	17:50 18.6	. . . . .
S	M	8	0:31 3.1	6:14 18.6	13:00 3.6	18:35 17.8
☾	Tu	9	1:21 3.8	7:08 17.7	13:55 4.5	19:25 17.1
A	W	10	2:18 4.3	7:58 17.0	14:55 5.1	20:22 16.6
	Th	11	3:21 4.3	8:59 16.6	16:00 5.1	21:23 16.5
	F	12	4:25 4.0	10:01 16.6	16:58 4.7	22:25 16.9
	S	13	5:22 3.2	11:02 17.2	17:58 4.1	23:22 17.6
	S	14	6:14 2.4	11:55 17.9	18:40 3.3	. . . . .
E	M	15	0:18 18.5	7:00 1.6	12:42 18.6	19:22 2.7
	Tu	16	1:00 19.3	7:42 1.0	13:24 19.3	20:00 2.2
●	W	17	1:42 20.1	8:20 0.7	14:04 19.3	20:37 1.8
	Th	18	2:22 20.6	8:57 0.7	14:43 20.2	21:13 1.6
	F	19	3:02 20.9	9:33 0.9	15:22 20.4	21:48 1.6
	S	20	3:42 20.9	10:11 1.3	16:02 20.3	22:27 1.8
	S	21	4:26 20.6	10:50 1.9	16:45 19.9	23:10 2.1
N P	M	22	5:12 20.0	11:36 2.8	17:32 19.3	23:59 2.7
	Tu	23	6:02 19.2	12:30 3.7	18:24 18.6	. . . . .
☽	W	24	1:00 3.8	6:58 18.3	13:39 4.4	19:23 17.9
	Th	25	2:13 3.6	8:02 17.6	14:54 4.7	20:30 17.5
	F	26	3:30 3.4	9:13 17.4	16:10 4.4	21:42 17.5
	S	27	4:02 2.8	10:25 17.7	17:18 3.5	22:58 18.0
E	S	28	5:45 1.7	11:32 18.4	18:17 2.5	23:56 18.8
	M	29	6:40 0.8	12:30 19.1	19:10 1.7	. . . . .
	Tu	30	0:50 19.5	7:32 0.1	13:20 19.7	19:57 1.2

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	1:40 20.0	8:18 −0.1	14:05 19.9	20:41 1.0
	Th	2	2:28 20.2	9:08 0.1	14:47 19.9	21:28 1.1
	F	3	3:04 20.2	9:44 0.7	15:24 19.7	22:02 1.5
	S	4	3:44 19.9	10:24 1.4	16:02 19.3	22:42 2.0
S	S	5	4:22 19.4	11:02 2.4	16:39 18.9	23:20 2.6
	M	6	5:08 18.9	11:48 3.3	17:18 18.5	. . . . .
A	Tu	7	0:02 3.1	5:45 18.4	12:27 4.1	18:02 18.0
	W	8	0:49 3.4	6:32 17.8	13:15 4.7	18:50 17.6
☾	Th	9	1:40 3.7	7:23 17.4	14:09 5.1	19:43 17.4
	F	10	2:36 3.7	8:19 17.2	14:38 5.2	20:40 17.4
	S	11	3:35 3.5	9:17 17.3	16:06 4.7	21:38 17.7
	S	12	4:32 3.0	10:15 17.7	17:02 4.2	22:35 18.2
E	M	13	5:27 2.3	11:10 18.3	17:58 3.5	23:30 18.9
	Tu	14	6:15 1.8	12:00 18.9	18:40 2.7	. . . . .
	W	15	0:20 19.6	7:02 1.3	12:47 19.5	19:25 2.1
●	Th	16	1:08 20.1	7:47 1.0	13:33 20.0	20:08 1.7
	F	17	1:58 20.5	8:30 1.0	14:17 20.3	20:51 1.4
	S	18	2:40 20.7	9:13 1.2	15:00 20.4	21:34 1.3
N P	S	19	3:24 20.5	9:57 1.6	15:45 20.2	22:18 1.5
	M	20	4:11 20.2	10:43 2.2	16:31 19.9	23:08 1.8
	Tu	21	5:00 19.7	11:33 2.9	17:20 19.4	. . . . .
	W	22	0:01 2.2	5:52 19.0	12:30 3.5	18:13 18.9
☽	Th	23	1:00 2.5	6:49 18.5	13:30 4.0	19:12 18.4
	F	24	2:06 2.7	7:52 18.0	14:43 4.2	20:15 18.0
E	S	25	3:14 2.5	8:57 17.7	15:50 3.9	21:21 17.9
	S	26	4:20 2.2	10:04 17.8	16:54 3.4	22:27 18.1
	M	27	5:20 1.7	11:07 18.2	17:58 2.8	23:30 18.5
	Tu	28	6:16 1.2	12:08 18.6	18:45 2.3	. . . . .
	W	29	0:25 18.8	7:08 1.0	12:55 18.9	19:35 1.9
○	Th	30	1:15 19.0	7:57 1.0	13:42 19.0	20:20 1.7
	F	31	2:01 19.1	8:41 1.3	14:28 18.9	21:02 1.8

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	2:42 19.0	9:23 1.8	15:00 18.8	21:43 2.0
	S	2	3:20 18.8	10:02 2.4	15:37 18.7	22:20 2.3
	M	3	3:58 18.7	10:40 3.1	16:13 18.5	22:57 2.6
A	Tu	4	4:38 18.5	11:17 3.7	16:50 18.5	23:35 2.8
	W	5	5:18 18.2	11:55 4.2	17:33 18.5	. . . . .
	Th	6	0:17 2.9	6:02 18.1	12:36 4.5	18:18 18.4
	F	7	1:02 3.0	6:50 15.0	13:21 4.7	19:07 18.4
☾	S	8	1:52 3.0	7:40 17.9	14:15 4.6	19:58 18.4
E	S	9	2:47 2.9	8:32 18.0	15:12 4.5	20:58 18.5
	M	10	3:41 2.7	9:30 18.2	16:08 4.1	21:52 18.8
	Tu	11	4:37 2.4	10:25 18.5	17:05 3.5	22:48 19.1
	W	12	5:32 2.1	11:20 18.9	18:00 2.9	23:43 19.5
	Th	13	6:25 1.8	12:13 19.4	18:52 2.3	. . . . .
	F	14	0:37 19.9	7:17 1.5	13:05 19.8	19:44 1.7
● N	S	15	1:30 20.1	8:07 1.4	13:55 20.1	20:32 1.3
P	S	16	2:20 20.3	8:56 1.5	14:43 20.4	21:22 1.0
	M	17	3:12 20.3	9:45 1.7	15:32 20.4	22:17 0.8
	Tu	18	4:00 20.1	10:35 2.0	16:20 20.3	23:02 0.9
	W	19	4:50 19.9	11:27 2.3	17:10 20.0	23:55 1.1
	Th	20	5:42 19.4	12:22 2.8	18:02 19.6	. . . . .
☽	F	21	0:51 1.4	6:37 19.0	13:20 3.2	18:57 19.2
E	S	22	1:50 1.7	7:35 18.5	14:22 3.4	19:55 18.7
	S	23	2:52 1.8	8:34 18.1	15:24 3.6	20:57 18.3
	M	24	3:58 2.0	9:37 17.8	16:27 3.5	22:00 18.0
	Tu	25	4:58 2.0	10:38 17.8	17:25 3.2	23:00 18.0
	W	26	5:50 2.0	11:37 17.8	18:21 2.8	. . . . .
	Th	27	0:00 18.0	6:49 1.9	12:32 18.0	19:13 2.5
	F	28	0:53 18.1	7:36 2.0	13:20 18.1	20:00 2.3
S ○	S	29	1:41 18.2	8:22 2.2	14:02 18.2	20:44 2.2
	S	30	2:24 18.2	9:05 2.5	14:40 18.2	21:24 2.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 10.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	3:01	9:44	15:14	22:02
			18.2	3.0	18.4	2.3
A	Tu	2	3:35	10:18	15:49	22:34
			18.2	3.4	18.6	2.3
	W	3	4:13	10:50	16:24	23:08
			18.4	3.7	18.8	2.3
	Th	4	4:51	11:21	17:04	23:43
			18.5	3.9	19.1	2.3
	F	5	5:32	11:53	17:46	. . .
			18.6	3.9	19.3	. . .
E	S	6	0:20	6:16	12:33	18:32
			2.3	18.7	3.9	19.4
☾	S	7	1:04	7:02	13:08	19:21
			2.3	18.7	4.0	19.3
	M	8	1:58	7:53	14:13	20:13
			2.4	18.6	3.9	19.2
	Tu	9	2:50	8:47	15:12	21:10
			2.6	18.5	3.9	19.1
	W	10	3:48	9:43	16:18	22:10
			2.8	18.6	3.7	19.0
	Th	11	4:52	10:42	17:22	23:08
			2.7	18.7	3.2	19.1
	F	12	5:55	11:42	18:23	. . .
			2.5	19.0	2.5	. . .
N	S	13	0:10	6:54	12:40	19.22
			19.3	2.2	19.5	1.7
●	S	14	1:06	7:50	13:34	20:17
			19.7	1.8	20.0	1.0
P	M	15	2:08	8:45	14:27	21:10
			20.1	1.5	20.5	0.4
	Tu	16	2:57	9:32	15:18	22:00
			20.4	1.3	20.8	0.0
	W	17	3:47	10:22	16:07	22:50
			20.5	1.3	20.9	—0.1
	Th	18	4:37	11:12	16:55	23:40
			20.4	1.5	20.8	0.0
E	F	19	5:26	12:02	17:43	. . .
			20.1	1.9	20.5	. . .
	S	20	0:32	6:16	12:55	18.35
			0.4	19.6	2.4	19.9
☽	S	21	1:25	7:08	13:52	19:30
			1.0	18.9	3.0	19.2
	M	22	2:23	8:05	14:51	20:27
			1.7	18.2	3.5	18.4
	Tu	23	3:23	9:04	15:54	21:28
			2.3	17.6	3.7	17.7
	W	24	4:25	10:07	16:57	22:32
			2.7	17.2	3.7	17.3
	Th	25	5:27	11:06	17:56	23:35
			2.9	17.1	3.4	17.2
S	F	26	6:24	12:08	18:54	. . .
			2.8	17.2	2.9	. . .
	S	27	0:32	7:17	12:57	19.40
			17.4	2.7	17.5	2.5
	S	28	1:22	8:03	13:41	20:25
			17.7	2.7	17.8	2.2
○ A	M	29	2:08	8:45	14:18	21:08
			17.9	2.8	18.1	2.0
	Tu	30	2:40	9:21	14:51	21:38
			18.1	3.0	18.5	1.9
	W	31	3:12	9:58	15:25	22:10
			18.3	3.2	19.0	1.8

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:47	10:20	16:00	22:40
			18.6	3.3	19.4	1.8
E	F	2	4:22	10:47	16:35	23:10
			18.8	3.3	19.8	1.7
	S	3	5:00	11:16	17:15	23:43
			19.1	3.3	20.1	1.8
	S	4	5:40	11:55	17:57	. . .
			19.3	3.2	20.1	. . .
	M	5	0:23	6:26	12:33	18:47
			2.0	19.2	3.3	19.9
☾	Tu	6	1:10	7:16	13:22	19.3,
			2.3	18.9	3.5	19.5
	W	7	2:03	8:08	14:25	20:35
			2.8	18.6	3.8	18.9
	Th	8	3:07	9:07	15:40	21:37
			3.4	18.3	3.9	18.5
N	F	9	4:20	10:13	16:54	22:43
			3.5	18.2	3.5	18.5
	S	10	5:31	11:17	18.03	23:30
			3.3	18.5	2.7	18.8
	S	11	6:35	12:20	19:07	. . .
			2.7	19.2	1.6	. . .
P ●	M	12	0:51	7:35	13:19	20:02
			19.4	1.9	20.0	0.5
	Tu	13	1:48	8:27	14:11	20:53
			20.1	1.2	20.8	—0.3
	W	14	2:40	9:17	15:00	21:42
			20.7	0.7	21.3	—0.8
E	Th	15	3:29	10:14	15:48	22:30
			21.0	0.5	21.6	—0.9
	F	16	4:16	10:50	16:35	23:16
			20.9	0.7	21.5	—0.6
	S	17	5:02	11:36	17:21	. . .
			20.6	1.3	21.0	. . .
	S	18	0:04	5:48	12:26	18:08
			0.0	19.8	2.0	20.2
☽	M	19	0:55	6:37	13:18	18.59
			1.0	18.9	2.8	19.2
	Tu	20	1:50	7:30	14:16	19:55
			2.1	18.1	3.5	18.2
	W	21	2:51	8:27	15:20	20:55
			3.0	17.2	4.0	17.3
S	Th	22	3:57	9:31	16:27	22:02
			3.6	16.7	4.1	16.7
	F	23	5:00	10:37	17:28	23:08
			3.7	16.5	3.7	16.7
	S	24	6:00	11:39	18:25	. . .
			3.6	16.7	3.1	. . .
A	S	25	0:08	6:52	12:30	19:14
			17.1	3.2	17.2	2.5
	M	26	0:57	7:38	13:15	19.58
			17.5	2.9	17.8	1.9
○	Tu	27	1:40	8:18	13:52	20:37
			18.0	2.7	18.4	1.5
	W	28	2:14	8:53	14:27	21:10
			18.4	2.7	19.0	1.3
	Th	29	2:47	9:23	14:59	21:40
			18.7	2.8	19.6	1.3
E	F	30	3:20	9:50	15:33	22:10
			19.1	2.8	20.1	1.3
	S	31	3:52	10:16	16:08	22:38
			19.4	2.7	20.4	1.4

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	4:28	10:44	16:47	23:08
			19.6	2.6	20.6	1.6
	M	2	5:09	11:17	17:28	23:47
			19.6	2.6	20.5	2.0
	Tu	3	5:58	11:58	18:15	. . .
			19.5	2.8	20.0	. . .
☾	W	4	0:31	6:41	12:47	19.08
			2.5	19.0	3.3	19.3
	Th	5	1:27	7:36	13:51	20:06
			3.4	18.4	3.8	18.5
N	F	6	2:35	8:37	15:10	21:12
			4.2	17.9	4.1	17.9
	S	7	3:58	9:46	16:35	22:23
			4.3	17.7	3.7	17.9
	S	8	5:15	10:55	17:49	23:33
			3.8	18.1	2.6	18.4
P	M	9	6:22	12:02	18:50	. . .
			2.9	19.0	1.3	. . .
	Tu	10	0:36	7:20	13:01	19.45
			19.3	1.8	20.0	0.0
●	W	11	1:32	8:11	13:54	20:35
			20.2	0.9	20.9	—0.8
E	Th	12	2:22	8:58	14:41	21:21
			20.9	0.3	21.6	—1.2
	F	13	3:08	9:43	15:27	22:06
			21.2	0.1	21.8	—1.2
	S	14	3:51	10:26	16:11	22:50
			21.1	0.4	21.6	—0.5
	S	15	4:35	11:10	16:58	23:35
			20.7	1.0	21.0	0.4
	M	16	5:18	11:55	17:39	. . .
			19.8	1.9	20.1	. . .
	Tu	17	0:23	6:05	12:45	18:28
			1.6	18.9	2.8	19.0
☽ S	W	18	1:17	6:55	13:41	19:21
			2.8	17.9	3.6	17.9
	Th	19	2:18	7:50	14:44	20:22
			3.7	17.0	4.2	17.0
	F	20	3:23	8:50	15:51	21:28
			4.4	16.4	4.2	16.5
A	S	21	4:28	9:58	16:55	22:36
			4.5	16.3	3.8	16.5
	S	22	5:28	11:00	17:51	23:35
			4.1	16.5	3.1	17.0
	M	23	6:23	11:56	18:42	. . .
			3.5	17.2	2.3	. . .
	Tu	24	0:25	7:07	12:42	19:24
			17.6	3.0	18.0	1.6
	W	25	1:07	7:45	13:20	20.05
			18.3	2.6	18.8	1.2
E ○	Th	26	1:42	8:22	13:56	20:39
			18.8	2.4	19.5	1.0
	F	27	2:17	8:52	14:30	21:10
			19.2	2.3	20.1	0.9
	S	28	2:50	9:20	15:06	21:40
			19.7	2.2	20.5	1.1
	S	29	3:25	9:50	15:42	22:10
			19.9	2.2	20.8	1.3
	M	30	4:01	10:20	16:21	22:41
			20.0	2.2	20.7	1.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 10.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3rd quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	4:40	10:58	17:08	23:20
			19.9	2.3	20.3	2.3
	W	2	5:24	11:30	17:50	. . .
			19.5	2.7	19.7	. . .
N ☾	Th	3	0:05	6:14	12:27	18:44
			3.2	18.9	3.2	18.8
	F	4	1:08	7:10	13:35	19:45
			4.1	18.2	3.8	18.0
	S	5	2:21	8:13	15:00	20:53
			4.8	17.6	4.0	17.5
	S	6	3:46	9:25	16:22	22:07
			4.8	17.5	3.4	17.6
P	M	7	5:02	10:38	17:32	23:18
			4.0	18.0	2.3	18.3
	Tu	8	6:06	11:45	18:32	. . .
			2.8	18.9	1.0	. . .
E	W	9	0:20	7:01	12:43	19:25
			19.3	1.7	19.9	—0.1
●	Th	10	1:13	7:50	13:34	20:13
			20.2	0.8	20.8	—0.8
	F	11	2:02	8:37	14:20	21:00
			20.7	0.3	21.3	—0.9
	S	12	2:45	9:20	15:04	21:43
			21.0	0.2	21.4	—0.6
	S	13	3:26	10:03	15:47	22:26
			20.8	0.6	21.1	0.1
	M	14	4:07	10:44	16:28	23:06
			20.3	1.2	20.5	1.1
	Tu	15	4:48	11:27	17:10	23:54
			19.6	2.0	19.7	2.3
S	W	16	5:32	12:15	17:58	. . .
			18.8	2.8	18.7	. . .
	Th	17	0:45	6:18	13:07	18:48
			3.4	17.9	3.5	17.8
☽	F	18	1:41	7:11	14:07	19:45
			4.3	17.2	4.0	17.0
A	S	19	2:44	8:08	15:12	20:47
			4.8	16.6	4.0	16.6
	S	20	3:47	9:12	16:13	21:50
			4.9	16.5	3.7	16.6
	M	21	4:47	10:13	17.10	22:50
			4.5	16.8	3.0	17.1
	Tu	22	5:40	11:12	18:00	23:43
			3.9	17.5	2.3	17.8
E	W	23	6:27	12:00	18:45	. . .
			3.2	18.3	1.6	. . .
	Th	24	0:28	7:10	12:43	19:27
			18.4	2.7	19.1	1.2
	F	25	1:08	7:47	13:24	20:04
			19.1	2.3	19.8	1.0
○	S	26	1:45	8:20	14:02	20:38
			19.6	2.0	20.3	1.0
	S	27	2:20	8:53	14:40	21:12
			20.0	1.8	20.6	1.2
	M	28	3:00	9:28	15:18	21:47
			20.2	1.8	20.7	1.5
	Tu	29	3:38	10:02	16:00	22:23
			20.2	1.8	20.5	2.1
N	W	30	4:20	10:42	16:45	23:05
			20.0	2.1	20.0	2.8
	Th	31	5:04	11:27	17:33	23:55
			19.5	2.5	19.3	3.6

NOVEMBER.

Moon.	Day of— W.	Mo	Time and Height of High and Low Water.			
	F	1	5:54	12:23	18:28	. . .
			18.8	3.1	18.4	. . .
☾	S	2	0:57	6:51	13:31	19:29
			4.4	18.2	3.3	17.8
P	S	3	2:13	7:56	14:50	20:38
			4.8	17.7	3.5	17.5
	M	4	3:32	9:05	16:06	21:50
			4.6	17.6	2.9	17.5
E	Tu	5	4:44	10:18	17:13	22:59
			3.9	18.0	2.0	18.2
	W	6	5:46	11:23	18:11	23.59
			2.9	18.7	1.0	19.0
	Th	7	6:40	12:21	19:08	. . .
			1.9	19.5	0.2	. . .
	F	8	0:52	7:31	13:12	19:53
			19.7	1.1	20.2	—0.2
●	S	9	1:40	8:16	14:00	20:38
			20.1	0.8	20.5	—0.2
	S	10	2:23	9:00	14:42	21:22
			20.2	0.7	20.5	0.2
	M	11	3:03	9:42	15:23	22:04
			20.1	1.0	20.2	1.0
S	Tu	12	3:43	10:23	16:04	22:45
			19.7	1.5	19.8	1.9
	W	13	4:22	11:05	16:47	23:28
			19.2	2.0	19.2	2.8
	Th	14	5:03	11:48	17:30	. . .
			18.7	2.5	18.5	. . .
	F	15	0:13	5:47	12:35	18:17
			3.7	18.2	3.1	17.9
A ☽	S	16	1:02	6:35	13:28	19:08
			4.5	17.7	3.4	17.3
	S	17	1:57	7:27	14:23	20:04
			4.9	17.4	3.6	17.0
	M	18	2:55	8:24	15:22	21:02
			5.0	17.3	3.4	17.0
	Tu	19	3:58	9:22	16:18	22:00
			4.8	17.5	3.0	17.3
E	W	20	4:48	10:20	17:12	22:54
			4.3	17.9	2.5	18.0
	Th	21	5:40	11:13	18:01	23:45
			3.6	18.5	2.0	18.5
	F	22	6:27	12:03	18:47	. . .
			3.0	19.2	1.5	. . .
	S	23	0:30	7:10	12:50	19:30
			19.1	2.4	19.7	1.3
○	S	24	1:14	7:50	13:33	20:12
			19.6	1.9	20.2	1.2
	M	25	1:57	8:30	14:18	20:52
			20.0	1.6	20.4	1.4
N	Tu	26	2:38	9:12	15:01	21:32
			20.2	1.4	20.4	1.7
	W	27	3:20	9:54	15:46	22:15
			20.3	1.4	20.3	2.1
P	Th	28	4:05	10:39	16:32	23:00
			20.2	1.5	19.9	2.7
	F	29	4:52	11:28	17:22	23:53
			19.8	1.9	19.4	3.3
	S	30	5:42	12:23	18:17	. . .
			19.3	2.2	18.7	. . .

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	0:52	6:38	13:27	19:15
			4.0	18.8	2.5	18.2
	M	2	1:59	7:38	14:35	20:20
			4.2	18.3	2.6	17.8
E	Tu	3	3:10	8:44	15:43	21:27
			4.2	18.0	2.4	17.7
	W	4	4:19	9.52	16:48	22:34
			3.8	18.1	2.0	18.0
	Th	5	5:21	10:58	17:47	23:35
			3.2	18.4	1.5	18.4
	F	6	6:18	11:58	18:43	. . .
			2.5	18.7	1.1	. . .
	S	7	0:30	7:10	12:52	19:34
			18.8	1.9	19.1	0.9
●	S	8	1:20	8:00	13:41	20:22
			19.1	1.5	19.2	1.0
S	M	9	2:05	8:44	14:26	21:05
			19.2	1.4	19.3	1.3
	Tu	10	2:45	9:27	15:07	21:47
			19.2	1.4	19.2	1.8
	W	11	3:23	10:07	15:45	22:27
			19.0	1.6	19.0	2.5
	Th	12	4:00	10:45	16:23	23:04
			19.0	1.9	18.8	3.1
	F	13	4:38	11:23	17:04	23:41
			18.5	2.2	18.4	3.7
A	S	14	5:18	12:08	17:46	. . .
			18.7	2.4	18.2	. . .
	S	15	0:22	6:01	12:47	18.32
			4.2	18.6	2.7	18.0
☽	M	16	1:07	6:48	13:35	19:20
			4.5	18.4	2.9	17.9
E	Tu	17	1:56	7:38	14:27	20:13
			4.7	18.3	3.0	17.8
	W	18	2:50	8:32	15:22	21:07
			4.7	18.3	3.0	17.8
	Th	19	3:47	9:28	16:18	22:03
			4.4	18.4	2.9	17.9
	F	20	4:45	10:26	17:14	22:59
			4.0	18.6	2.6	18.4
	S	21	5:41	11:22	18:08	23:54
			3.4	18.9	2.3	18.8
	S	22	6:34	12:17	19:00	. . .
			2.8	19.3	2.0	. . .
	M	23	0:45	7:25	13:08	19:50
			19.4	2.0	19.7	1.7
N ○	Tu	24	1:34	8:14	13:59	20:36
			19.8	1.4	20.0	1.6
	W	25	2:22	9:01	14:47	21:23
			20.3	1.0	20.2	1.6
P	Th	26	3:08	9:47	15:35	22:08
			20.5	0.7	20.3	1.8
	F	27	3:55	10:35	16:22	22:57
			20.6	0.6	20.2	2.1
	S	28	4:42	11:25	17:13	23:47
			20.5	0.7	19.8	2.5
	S	29	5:30	12:17	18:04	. . .
			20.5	1.0	19.4	. . .
E ☾	M	30	0:40	6:24	13:12	18:58
			3.0	19.7	1.5	18.8
	Tu	31	1:40	7:19	14:13	19:57
			3.4	19.1	1.9	18.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 10.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:38 3.1	8:02 16.4	14:22 2.5	20:38 16.3
	Tu	2	2:58 2.6	9:06 17.1	15:40 2.0	21:37 17.2
	W	3	4:18 1.9	10:04 17.9	16:49 1.3	22:30 18.0
N ○ P	Th	4	5:18 1.1	10:58 18.4	17:48 0.7	23:19 18.5
	F	5	6:12 0.4	11:41 18.8	18:37 0.3	. . . . .
	S	6	0:02 18.8	7:01 0.0	12:26 18.8	19:24 0.2
	S	7	0:47 18.8	7:47 −0.1	13:10 18.5	20:10 0.3
	M	8	1:30 18.6	8:30 0.0	13:54 18.0	20:52 0.7
	Tu	9	2:18 18.1	9:15 0.4	14:38 17.4	21:35 1.3
E	W	10	3:00 17.4	10:00 1.0	15:25 16.5	22:22 1.9
☾	Th	11	3:50 16.6	10:50 1.7	16:18 15.6	23:10 2.7
	F	12	4:45 15.7	11:41 2.5	17:20 14.8	. . . . .
	S	13	0:08 3.4	5:52 15.0	12:45 3.1	18:32 14.3
	S	14	1:15 3.8	7:07 14.7	13:50 3.4	19:47 14.4
	M	15	2:31 3.9	8:20 14.8	15:10 3.3	20:55 14.7
	Tu	16	3:42 3.5	9:21 15.2	16:15 2.9	21:48 15.2
S	W	17	4:43 2.9	10:10 15.7	17:08 2.5	22:32 15.6
A	Th	18	5:22 2.5	10:50 16.0	17:54 2.3	23:08 15.9
●	F	19	6:13 2.2	11:24 16.2	18:33 2.2	23:40 16.3
	S	20	6:48 2.1	11:58 16.4	19:04 2.4	. . . . .
	S	21	0:07 16.7	7:15 2.1	12:22 16.7	19:27 2.6
	M	22	0:36 17.2	7:37 2.1	12:51 17.0	19:42 2.6
	Tu	23	1:10 17.6	7:54 2.0	13:25 17.2	20:02 2.4
E	W	24	1:44 17.9	8:20 1.8	14:08 17.4	20:30 2.3
	Th	25	2:25 17.9	8:55 1.7	14:45 17.2	21:08 2.3
	F	26	3:10 17.7	9:35 1.9	15:36 16.8	21:52 2.4
☽	S	27	4:00 17.0	10:23 2.3	16:28 16.1	22:47 2.9
	S	28	4:58 16.2	11:22 2.8	17:32 15.3	23:50 3.4
	M	29	6:07 15.5	12:28 3.3	18:48 15.0	. . . . .
	Tu	30	1:00 3.7	7:28 15.3	13:47 3.5	20:08 15.3
N	W	31	2:32 3.5	8:45 15.9	15:26 3.0	21:20 16.2

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:06 2.5	9:51 16.9	16:45 1.9	22:19 17.2
P	F	2	5:14 1.2	10:47 17.8	17:43 0.8	23:10 18.2
○	S	3	6:07 0.1	11:35 18.5	18:32 0.0	23:56 18.9
	S	4	6:54 −0.1	12:08 18.8	19:16 −0.4	. . . . .
	M	5	0:38 19.2	7:37 −0.9	12:59 18.8	19:56 −0.4
E	Tu	6	1:17 19.2	8:16 −0.8	13:37 18.6	20:33 0.0
	W	7	1:55 18.9	8:53 −0.3	14:15 18.0	21:10 0.7
	Th	8	2:34 18.2	9:32 0.5	14:55 17.2	21:48 1.6
	F	9	3:17 17.3	10:10 1.5	15:38 16.2	22:26 2.6
☾	S	10	4:01 16.1	10:52 2.6	16:27 15.0	23:10 3.6
	S	11	4:55 15.0	11:45 3.7	17:27 14.0	. . . . .
	M	12	0:16 4.5	6:02 14.0	12:53 4.4	18:42 13.4
S	Tu	13	1:38 4.8	7:24 13.7	14:21 4.6	20:05 13.6
A	W	14	3:00 4.6	8:42 14.1	15:41 4.1	21:15 14.3
	Th	15	4:12 3.7	9:42 14.9	16:42 3.3	22:06 15.2
	F	16	5:05 2.8	10:30 15.6	17:30 2.6	22:46 16.0
	S	17	5:49 2.0	11:05 16.3	18:08 2.1	23:20 16.7
●	S	18	6:25 1.5	11:37 16.9	18:40 1.8	23:51 17.5
	M	19	6:58 1.2	12:06 17.4	19:05 1.7	. . . . .
	Tu	20	0:20 18.1	7:16 1.0	12:36 17.9	19:23 1.6
E	W	21	0:52 18.6	7:36 1.0	13:08 18.2	19:43 1.5
	Th	22	1:26 18.9	8:00 0.9	13:42 18.3	20:10 1.4
	F	23	2:02 18.8	8:32 1.1	14:21 18.1	20:45 1.6
	S	24	2:46 18.3	9:10 1.5	15:08 17.4	21:25 2.1
☽	S	25	3:32 17.4	9:55 2.2	15:57 16.4	22:16 2.8
	M	26	4:26 16.1	10:50 3.1	16:58 15.2	23:19 3.7
N	Tu	27	5:35 15.0	12:00 3.9	18:15 14.4	. . . . .
	W	28	0:35 4.2	7:01 14.5	13:32 4.2	19:47 14.5
	Th	29	2:26 3.9	8:32 15.1	15:23 3.4	21:08 15.7

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	4:01 2.5	9:43 16.4	16:37 2.0	22:11 17.0
	S	2	5:05 1.0	10:40 17.6	17:32 0.7	23:01 18.2
○	S	3	5:55 −0.3	11:25 18.5	18:18 −0.3	23:45 19.1
E	M	4	6:40 −1.1	12:06 19.0	19:00 −0.7	. . . . .
	Tu	5	0:22 19.4	7:18 −1.3	12:42 19.0	19:37 −0.6
	W	6	0:57 19.4	7:55 −1.0	13:15 18.7	20:10 −0.1
	Th	7	1:30 19.1	8:28 −0.3	13:48 18.2	20:42 0.8
	F	8	2:03 18.4	9:00 0.7	14:21 17.4	21:12 1.8
	S	9	2:38 17.5	9:32 1.8	14:58 16.4	21:43 2.8
☾	S	10	3:20 16.3	10:06 3.0	15:41 15.3	22:20 3.8
S	M	11	4:06 15.0	10:48 4.1	16:32 14.1	23:10 4.7
	Tu	12	5:05 13.8	11:50 5.0	17:40 13.2	. . . . .
A	W	13	0:20 5.3	6:23 13.1	13:13 5.4	19:08 13.0
	Th	14	2:00 5.2	7:55 13.4	14:52 4.9	20:30 13.9
	F	15	3:29 4.2	9:07 14.4	16:02 3.9	21:30 15.1
	S	16	4:27 2.9	9:58 15.6	16:52 2.8	22:16 16.3
	S	17	5:13 1.8	10:38 16.6	17:34 1.9	22:53 17.4
●	M	18	5:50 1.0	11:12 17.5	18:07 1.4	23:27 18.3
E	Tu	19	6:22 0.5	11:43 18.2	18:34 1.0	23:48 19.0
	W	20	6:47 0.3	12:13 18.7	18:57 0.9	. . . . .
	Th	21	0:30 19.4	7:12 0.3	12:46 19.0	19:23 0.9
	F	22	1:04 19.5	7:40 0.5	13:20 18.7	19:52 1.0
	S	23	1:40 19.2	8:12 0.9	13:59 18.4	20:26 1.4
	S	24	2:24 18.4	8:51 1.6	14:42 17.5	21:06 2.1
	M	25	3:08 17.3	9:35 2.5	15:33 16.9	21:58 3.0
N ☽	Tu	26	4:08 15.8	10:32 3.5	16:34 15.0	23:04 3.9
	W	27	5:12 14.5	11:48 4.3	17:55 14.1	. . . . .
P	Th	28	0:32 4.4	6:46 14.0	13:31 4.4	19:33 14.4
	F	29	2:24 3.7	8:22 14.9	15:12 3.3	20:57 15.7
	S	30	3:47 2.2	9:33 16.3	16:19 1.8	21:57 17.2
	S	31	4:47 0.7	10:27 17.6	17:12 0.6	22:45 18.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 9.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	5:35	11:10	18:00	23:25
			−0.5	18.4	−0.3	19.0
	Tu	2	6:19	11:47	18:38	. . .
			−1.1	18.8	−0.5	. . .
	W	3	0:02	6:57	12:20	19:14
			19.3	−1.0	18.7	−0.2
	Th	4	0:34	7:32	12:50	19:47
			19.1	−0.5	18.3	0.5
	F	5	1:04	8:02	13:19	20:15
			18.6	0.4	17.8	1.4
	S	6	1:33	8:30	13:48	20:40
			18.0	1.5	17.1	2.3
	S	7	2:05	8:58	14:24	21:09
			17.2	2.5	16.2	3.2
S	M	8	2:44	9:28	15:04	21:40
			16.2	3.5	15.4	4.0
☾	Tu	9	3:28	10:05	15:51	22:25
			15.1	4.4	14.4	4.6
A	W	10	4:22	10:58	16:52	23:30
			14.0	5.1	13.6	5.1
	Th	11	5:32	12:10	18:11	. . .
			13.2	5.4	13.3	. . .
	F	12	0:50	7:00	13:38	19:38
			5.0	13.2	5.1	14.0
	S	13	2:21	8:20	15:02	20:46
			4.2	14.3	4.1	15.2
	S	14	3:38	9:17	16:02	21:38
			3.0	15.7	3.0	16.6
E	M	15	4:26	10:02	16:47	22:20
			1.8	16.9	1.9	17.9
	Tu	16	5:07	10:40	17:26	22:57
			0.9	17.9	1.2	18.8
●	W	17	5:44	11:16	17:58	23:32
			0.3	18.7	0.8	19.4
	Th	18	6:16	11:49	18:30	. . .
			0.1	19.1	0.6	. . .
	F	19	0:09	6:49	12:24	19:01
			19.7	0.1	19.2	0.7
	S	20	0:43	7:22	13:00	19:37
			19.6	0.5	19.0	1.0
	S	21	1:23	8:00	13:40	20:16
			19.1	1.1	18.3	1.5
N P	M	22	2:05	8:42	14:24	21:02
			18.1	1.8	17.4	2.3
	Tu	23	2:52	9:31	15:16	21:58
			16.9	2.8	16.2	3.1
☽	W	24	3:48	10:30	16:20	23:08
			15.5	3.7	15.0	3.7
	Th	25	5:00	11:49	17:40	. . .
			14.4	4.2	14.3	. . .
	F	26	0:36	6:32	13:21	19:17
			3.8	14.2	4.0	14.7
	S	27	2:07	8:06	14:46	20:36
			3.1	15.0	3.0	15.9
E	S	28	3:21	9:14	15:52	21:36
			1.9	16.3	1.8	17.2
	M	29	4:21	10:06	16:47	22:24
			0.7	17.4	0.8	18.1
	Tu	30	5:11	10:48	17:34	23:03
			−0.1	17.9	0.3	18.5

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	5:56	11:24	18:15	23:38
			−0.1	18.2	0.2	18.6
	Th	2	6:36	11:56	18:58	. . .
			−0.2	18.0	0.6	. . .
	F	3	0:09	7:11	12:25	19:26
			18.2	0.5	17.6	1.4
	S	4	0:38	7:43	12:52	19:55
			17.7	1.4	17.0	2.1
S	S	5	1:05	8:09	13:20	20:16
			17.2	2.4	16.5	2.9
	M	6	1:36	8:30	13:54	20:40
			16.6	3.2	16.0	3.5
A	Tu	7	2:12	8:57	14:32	21:12
			15.9	3.9	15.6	4.0
	W	8	2:55	9:32	15:21	21:55
			15.2	4.4	14.9	4.3
☾	Th	9	3:48	10:20	16:16	22:52
			14.4	4.8	14.4	4.4
	F	10	4:52	11:26	17:24	. . .
			13.9	4.9	14.2	. . .
	S	11	0:00	6:08	12:34	18:42
			4.3	13.9	4.6	14.5
	S	12	1:11	7:24	13:44	19:56
			3.8	14.6	4.0	15.5
E	M	13	2:22	8:30	14:52	20:54
			2.9	15.7	3.1	16.7
	Tu	14	3:24	9:22	15:50	21:42
			2.0	16.9	2.2	17.9
	W	15	4:17	10:06	16:40	22:26
			1.2	17.9	1.4	18.7
●	Th	16	5:04	10:48	17:24	23:06
			0.6	18.6	0.9	19.3
	F	17	5:47	11:27	18:06	23:46
			0.4	19.0	0.7	19.4
	S	18	6:30	12:04	18:47	. . .
			0.4	19.0	0.8	. . .
N P	S	19	0:26	7:10	12:45	19:30
			19.2	0.7	18.8	1.0
	M	20	1:07	7:56	13:28	20:17
			18.6	1.2	18.2	1.5
	Tu	21	1:52	8:42	14:14	21:09
			17.8	1.9	17.4	2.0
	W	22	2:42	9:36	15:07	22:05
			16.8	2.5	16.4	2.5
☽	Th	23	3:40	10:34	16:10	23:10
			15.7	3.1	15.5	2.8
	F	24	4:48	11:42	17:25	. . .
			14.9	3.4	15.0	. . .
E	S	25	0:20	6:11	12:57	18:50
			2.9	14.7	3.3	15.2
	S	26	1:36	7:37	14:11	20:07
			2.5	15.2	2.8	15.9
	M	27	2:46	8:42	15:18	21:06
			1.9	16.1	2.1	16.8
	Tu	28	3:49	9:38	16:16	21:57
			1.2	16.8	1.5	17.4
	W	29	4:43	10:22	17:08	22:39
			0.7	17.2	1.2	17.6
☾	Th	30	5:31	11:00	17:54	23:15
			0.4	17.2	1.2	17.5
	F	31	6:16	11:32	18:35	23:47
			0.9	17.0	1.5	17.2

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	6:56	12:08	19:12	. . .
			1.5	16.7	2.0	. . .
	S	2	0:16	7:29	12:30	19:42
			16.6	2.2	16.3	2.7
	M	3	0:44	7:55	13:00	20:06
			16.4	3.0	16.1	3.2
A	Tu	4	1:16	8:14	13:31	20:24
			16.1	3.6	16.0	3.6
	W	5	1:50	8:37	14:08	20:55
			15.9	4.0	15.9	3.7
	Th	6	2:30	9:08	14:56	21:32
			15.5	4.1	15.7	3.7
	F	7	3:20	9:52	15:47	22:20
			15.2	4.1	15.5	3.6
☾	S	8	4:16	10:43	16:46	23:16
			14.9	4.0	15.3	3.4
E	S	9	5:20	11:45	17:52	. . .
			14.8	3.9	15.4	. . .
	M	10	0:16	6:30	12:46	19:01
			3.1	14.7	3.4	15.8
	Tu	11	1:18	7:37	13:45	20:06
			2.7	15.7	3.0	16.5
	W	12	2:24	8:40	14:52	21:05
			2.2	16.6	2.4	17.4
	Th	13	3:30	9:32	15:57	21:56
			1.6	17.4	1.9	18.2
	F	14	4:31	10:22	16:56	22:44
			1.2	18.1	1.4	18.7
● N	S	15	5:26	11:06	17:50	23:29
			0.9	18.5	1.0	18.9
P	S	16	6:17	11:50	18:40	. . .
			0.7	18.7	0.7	. . .
	M	17	0:13	7:06	12:34	19:30
			18.8	0.8	18.6	0.7
	Tu	18	0:58	7:55	13:20	20:20
			18.4	1.0	18.3	0.9
	W	19	1:44	8:44	14:07	21:10
			17.8	1.3	17.8	1.1
	Th	20	2:33	9:34	14:57	22:00
			17.2	1.7	17.1	1.4
☽	F	21	3:27	10:25	15:52	22:54
			16.3	2.1	16.4	1.8
E	S	22	4:27	11:20	16:57	23:52
			15.6	2.5	15.8	2.1
	S	23	5:36	12:21	18:10	. . .
			15.1	2.8	15.5	. . .
	M	24	0:57	6:52	13:29	19:27
			2.8	15.1	3.0	15.6
	Tu	25	2:06	8:04	14:38	20:30
			2.4	15.4	2.8	15.9
	W	26	3:14	9:04	15:44	21:27
			2.2	15.8	2.5	16.3
	Th	27	4:16	9:56	16:43	22:16
			1.9	16.1	2.2	16.5
	F	28	5:10	10:39	17:34	22:56
			1.7	16.2	1.9	16.5
S ○	S	29	5:58	11:14	18:19	23:30
			1.7	16.2	2.0	16.4
	S	30	6:40	11:46	18:59	23:58
			2.0	16.1	2.3	16.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 9.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	7:16	12:14	19:30	. . .
			2.5	16.0	2.6	. . .
A	Tu	2	0:29	7:44	12:42	19:54
			16.0	3.0	16.1	3.0
	W	3	0:57	8:08	13:14	20:13
			16.1	3.4	16.4	3.1
	Th	4	1:31	8:19	13:50	20:36
			16.2	3.5	16.6	3.0
	F	5	2:09	8:45	14:31	21:08
			16.2	3.4	16.7	2.8
E	S	6	2:52	9:20	15:17	21:48
			16.2	3.3	16.6	2.7
☾	S	7	3:43	10:06	16:10	22:36
			16.0	3.1	16.4	2.6
	M	8	4:38	11:00	17:06	23:32
			15.7	3.1	16.1	2.7
	Tu	9	5:40	11:57	18:14	. . .
			15.5	3.1	16.0	. . .
	W	10	0:30	6:50	13:00	19:24
			2.8	15.5	3.1	16.1
	Th	11	1:36	8:00	14:08	20:32
			2.7	15.9	2.9	16.6
	F	12	2:52	9:04	15:28	21:33
			2.4	16.6	2.4	17.3
N	S	13	4:08	10:01	16:40	22:28
			2.0	17.4	1.8	18.0
●	S	14	5:16	10:51	17:43	23:17
			1.3	18.1	1.0	18.4
P	M	15	6:12	11:40	18:37	. . .
			0.8	18.6	0.4	. . .
	Tu	16	0:04	7:01	12:26	19:25
			18.6	0.4	18.8	0.0
	W	17	0:49	7:48	13:10	20:11
			18.6	0.3	18.8	—0.1
	Th	18	1:32	8:32	13:54	20:54
			18.3	0.4	18.5	0.1
E	F	19	2:17	9:16	14:40	21:40
			17.8	0.8	18.0	0.5
	S	20	3:04	10:00	15:27	22:28
			17.1	1.4	17.2	1.2
☽	S	21	3:54	10:49	16:20	23:16
			16.2	2.1	16.3	2.0
	M	22	4:52	11:40	17:22	. . .
			15.3	2.9	15.4	. . .
	Tu	23	0:14	6:00	12:42	18:34
			2.7	14.6	3.5	14.9
	W	24	1:21	7:14	13:56	19:51
			3.2	14.4	3.8	14.8
	Th	25	2:37	8:27	15:12	20:58
			3.3	14.6	3.6	15.1
S	F	26	3:48	9:30	16:19	21:54
			3.1	15.1	3.1	15.5
	S	27	4:48	10:18	17:13	22:39
			2.7	15.5	2.5	15.8
	S	28	5:38	10:57	18:00	23:15
			2.3	15.8	2.1	16.0
○ A	M	29	6:20	11:30	18:38	23:45
			2.1	16.1	1.9	16.2
	Tu	30	6:56	11:59	19:10	. . .
			2.3	16.4	2.0	. . .
	W	31	0:13	7:24	12:28	19:34
			16.4	2.5	16.7	2.1

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:40	7:43	12:56	19:52
			16.6	2.7	17.2	2.2
E	F	2	1:11	7:56	13:30	20:12
			16.8	2.7	17.6	2.1
	S	3	1:44	8:19	14:06	20:40
			17.2	2.5	17.8	2.0
	S	4	2:24	8:50	14:47	21:16
			17.1	2.5	17.6	2.0
	M	5	3:09	9:29	15:34	21:59
			16.9	2.5	17.2	2.2
☾	Tu	6	4:00	10:20	16:26	22:52
			16.4	2.7	16.5	2.7
	W	7	4:59	11:19	17:31	23:53
			15.6	3.2	15.7	3.1
	Th	8	6:09	12:22	18:48	. . .
			15.1	3.5	15.3	. . .
N	F	9	1:02	7:28	13:40	20:08
			3.5	15.2	3.5	15.6
	S	10	2:31	8:44	15:16	21:20
			3.3	15.8	3.0	16.4
	S	11	4:02	9:48	16:36	22:18
			2.5	16.9	1.8	17.4
P ●	M	12	5:10	10:42	17:37	23:08
			1.3	18.0	0.6	18.3
	Tu	13	6:04	11:30	18:26	23:54
			0.4	18.8	—0.4	18.9
	W	14	6:50	12:14	19:11	. . .
			—0.3	19.3	—0.9	. . .
E	Th	15	0:36	7:32	12:54	19:52
			19.1	—0.5	19.5	—0.9
	F	16	1:16	8:12	13:34	20:32
			18.9	—0.3	19.3	—0.5
	S	17	1:56	8:51	14:14	21:12
			18.4	0.3	18.6	0.1
	S	18	2:36	9:30	14:57	21:54
			17.6	1.2	17.6	1.1
☽	M	19	3:18	10:12	15:42	22:38
			16.6	2.2	16.5	2.2
	Tu	20	4:07	10:58	16:34	23:30
			15.4	3.2	15.3	3.3
	W	21	5:05	11:54	17:40	. . .
			14.3	4.1	14.2	. . .
S	Th	22	0:33	6:19	13:10	19:02
			4.1	13.5	4.6	13.7
	F	23	1:57	7:46	14:37	20:26
			4.4	13.6	4.4	14.1
	S	24	3:18	9:00	15:51	21:30
			4.0	14.4	3.6	14.9
A	S	25	4:21	9:58	16:46	22:18
			3.2	15.2	2.7	15.6
	M	26	5:11	10:36	17:32	22:56
			2.5	16.0	1.9	16.2
○	Tu	27	5:53	11:08	18:10	23:26
			2.0	16.6	1.4	16.7
	W	28	6:28	11:38	18:41	23:54
			1.8	17.2	1.3	17.2
	Th	29	6:54	12:06	19:06	. . .
			1.8	17.8	1.2	. . .
E	F	30	0:19	7:13	12:34	19:23
			17.5	1.9	18.3	1.3
	S	31	0:48	7:28	13:07	19:43
			17.8	1.9	18.6	1.3

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:21	7:51	13:41	20:11
			17.9	1.8	18.6	1.4
	M	2	1:58	8:21	14:21	20:45
			17.9	1.9	18.3	1.7
	Tu	3	2:40	9:01	15:06	21:28
			17.4	2.2	17.5	2.2
☾	W	4	3:30	9:46	15:57	22:20
			16.6	2.8	16.4	3.0
	Th	5	4:26	10:48	17:00	23:28
			15.5	3.5	15.2	3.8
N	F	6	5:37	12:00	18:21	. . .
			14.6	4.1	14.5	. . .
	S	7	0:44	7:06	13:32	19:52
			4.2	14.4	4.0	14.8
	S	8	2:30	8:32	15:16	21:11
			3.8	15.4	3.0	16.0
P	M	9	3:58	9:40	16:30	22:10
			2.5	16.8	1.4	17.4
	Tu	10	4:59	10:32	17:24	22:58
			1.0	18.2	0.0	18.5
●	W	11	5:48	11:16	18:10	23:40
			—0.1	19.2	—1.0	19.2
E	Th	12	6:30	11:58	18:52	. . .
			—0.7	19.7	—1.4	. . .
	F	13	0:18	7:12	12:35	19:30
			19.3	—0.8	19.8	—1.2
	S	14	0:52	7:48	13:10	20:08
			19.1	—0.3	19.4	—0.6
	S	15	1:27	8:24	13:44	20:44
			18.5	0.5	18.7	0.4
	M	16	2:02	8:58	14:21	21:20
			17.6	1.5	17.7	1.6
	Tu	17	2:40	9:34	15:02	21:58
			16.5	2.5	16.4	2.8
☽ S	W	18	3:23	10:14	15:50	22:42
			15.3	3.1	15.1	4.0
	Th	19	4:16	11:06	16:48	23:45
			14.1	4.5	13.8	4.8
	F	20	5:22	12:20	18:10	. . .
			13.2	5.1	13.0	. . .
A	S	21	1:08	6:53	13:52	19:44
			5.1	13.0	4.9	13.4
	S	22	2:38	8:20	15:12	20:56
			4.6	13.8	4.0	14.4
	M	23	3:46	9:20	16:10	21:48
			3.7	15.1	2.8	15.5
	Tu	24	4:36	10:04	16:56	22:26
			2.7	16.2	1.8	16.5
	W	25	5:17	10:38	17:34	22:57
			1.9	17.2	1.0	17.3
E ○	Th	26	5:51	11:10	18:04	23:26
			1.5	18.0	0.7	17.8
	F	27	6:18	11:40	18:30	23:54
			1.3	18.6	0.6	18.2
	S	28	6:38	12:10	18:52	. . .
			1.2	19.0	0.7	. . .
	S	29	0:24	7:00	12:42	19:17
			18.5	1.3	19.2	0.9
	M	30	0:57	7:26	13:17	19:45
			18.5	1.4	19.0	1.2

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 9.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:34	7:58	13:56	20:20
			18.3	1.6	18.4	1.7
	W	2	2:14	8:38	14:41	21:04
			17.7	2.2	17.4	2.6
N	Th	3	3:04	9:26	15:32	21:59
☾			16.6	3.0	16.1	3.5
	F	4	4:01	10:28	16:36	23:10
			15.3	3.8	14.8	4.3
	S	5	5:14	11:51	18:02	. . .
			14.3	4.3	14.0	. . .
	S	6	0:42	6:50	13:34	19:40
			4.6	14.2	4.0	14.5
P	M	7	2:26	8:20	15:06	21:00
			3.8	15.3	2.7	15.9
	Tu	8	3:42	9:26	16:12	21:58
			2.3	16.9	1.1	17.4
E	W	9	4:40	10:18	17:04	22:42
			0.9	18.3	−0.2	18.4
●	Th	10	5:28	11:00	17:50	23:22
			−0.1	19.2	−1.0	19.0
	F	11	6:11	11:38	18:30	23:56
			−0.5	19.6	−1.1	19.1
	S	12	6:50	12:13	19:08	. . .
			−0.4	19.5	−0.9	. . .
	S	13	0:29	7:24	12:45	19:43
			18.7	0.1	19.0	0.0
	M	14	1:00	7:58	13:16	20:15
			18.0	1.0	18.2	1.2
	Tu	15	1:38	8:29	13:48	20:46
			17.3	2.0	17.3	2.3
S	W	16	2:08	9:00	14:26	21:20
			16.3	3.0	16.3	3.4
	Th	17	2:46	9:36	15:12	22:00
			15.3	3.9	15.1	4.3
☽	F	18	3:36	10:24	16:06	22:53
			14.3	4.6	13.9	5.1
A	S	19	4:36	11:29	17:16	. . .
			13.5	5.1	13.0	. . .
	S	20	0:10	5:54	12:51	18:46
			5.5	13.1	5.0	13.1
	M	21	1:36	7:23	14:14	20:05
			5.1	13.7	4.2	14.1
	Tu	22	2:49	8:32	15:19	21:04
			4.2	14.9	3.1	15.3
E	W	23	3:46	9:23	16:08	21:48
			3.1	16.3	2.0	16.5
	Th	24	4:30	10:04	16:49	22:24
			2.1	17.5	1.1	17.5
	F	25	5:07	10:40	17:25	22:58
			1.5	18.5	0.6	18.2
○	S	26	5:40	11:13	17:56	23:30
			1.0	19.1	0.4	18.8
	S	27	6:08	11:48	18:24	. . .
			0.9	19.4	0.5	. . .
	M	28	0:02	6:36	12:21	18:54
			19.0	1.0	19.4	0.7
	Tu	29	0:38	7:10	12:59	19:30
			18.9	1.2	19.0	1.2
N	W	30	1:14	7:46	13:38	20:10
			18.3	1.6	18.3	1.9
	Th	31	1:58	8:30	14:24	20:56
			17.7	2.3	17.2	2.8

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	2:46	9:24	15:17	21:54
			16.5	3.0	15.9	3.6
☾	S	2	3:46	10:28	16:22	23:06
			15.3	3.7	14.7	4.2
P	S	3	5:00	11:52	17:48	. . .
			14.5	3.9	14.0	. . .
	M	4	0:36	6:31	13:21	19:21
			4.2	14.4	3.4	14.6
E	Tu	5	2:03	8:00	14:42	20:38
			3.4	15.4	2.3	15.8
	W	6	3:17	9:05	15:46	21:36
			2.2	16.8	1.1	17.1
	Th	7	4:16	9:57	16:40	22:23
			1.1	17.9	0.1	18.0
	F	8	5:04	10:40	17:28	23:02
			0.4	18.6	−0.4	18.4
●	S	9	5:50	11:18	18:11	23:36
			0.1	18.8	−0.4	18.8
	S	10	6:30	11:51	18:50	. . .
			0.3	18.6	0.1	. . .
	M	11	0:08	7:08	12:24	19:25
			17.9	0.9	18.1	1.0
S	Tu	12	0:38	7:40	12:52	19:56
			17.4	1.7	17.5	2.0
	W	13	1:08	8:10	13:22	20:24
			16.8	2.5	16.8	2.9
	Th	14	1:40	8:36	13:58	20:50
			16.1	3.2	16.0	3.8
	F	15	2:17	9:06	14:40	21:26
			15.5	3.9	15.2	4.4
A	S	16	3:02	9:49	15:30	22:10
☽			14.9	4.3	14.4	4.8
	S	17	3:58	10:40	16:31	23:10
			14.3	4.6	13.7	5.0
	M	18	5:02	11:48	17:44	. . .
			14.0	4.5	13.6	. . .
	Tu	19	0:19	6:20	12:58	19:02
			4.9	14.2	4.1	14.1
E	W	20	1:29	7:34	14:04	20:10
			4.3	15.0	3.2	15.1
	Th	21	2:32	8:34	15:06	21:03
			3.5	16.1	2.4	16.2
	F	22	3:30	9:24	15:58	21:48
			2.6	17.3	1.6	17.3
	S	23	4:18	10:08	16:43	22:29
			1.8	18.2	1.0	18.1
○	S	24	5:02	10:48	17:24	23:07
			1.3	18.9	0.7	18.7
	M	25	5:43	11:26	18:04	23:45
			1.0	19.2	0.7	18.9
N	Tu	26	6:22	12:04	18:44	. . .
			0.9	19.2	0.8	. . .
	W	27	0:22	7:02	12:44	19:25
			18.8	1.1	18.6	1.3
P	Th	28	1:04	7:46	13:27	20:10
			18.3	1.4	18.0	1.8
	F	29	1:48	8:36	14:14	21:00
			17.8	1.9	17.2	2.4
	S	30	2:36	9:29	15:07	21:56
			17.0	2.4	16.2	3.0

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	3:34	10:30	16:08	23:00
			16.0	2.8	15.2	3.4
	M	2	4:41	11:38	17:24	. . .
			15.3	3.0	14.6	. . .
E	Tu	3	0:11	6:02	12:52	18:49
			3.5	15.0	2.9	14.7
	W	4	1:30	7:26	14:10	20:07
			3.3	15.4	2.4	15.5
	Th	5	2:43	8:35	15:17	21:09
			2.6	16.2	1.7	16.4
	F	6	3:48	9:32	16:17	22:00
			1.9	17.1	1.0	16.9
	S	7	4:44	10:20	17:10	22:42
			1.3	17.5	0.8	17.3
●	S	8	5:32	11:00	17:56	23:20
			1.0	17.7	0.6	17.3
S	M	9	6:18	11:35	18:39	23:52
			1.1	17.5	1.0	17.0
	Tu	10	6:58	12:07	19:16	. . .
			1.5	17.2	1.6	. . .
	W	11	0:22	7:31	12:38	19:48
			16.7	2.1	16.7	2.4
	Th	12	0:50	8:00	13:04	20:13
			16.4	2.6	16.3	3.1
	F	13	1:20	8:24	13:37	20:33
			16.1	3.1	16.0	3.6
A	S	14	1:56	8:48	14:15	21:00
			16.0	3.4	15.7	3.9
	S	15	2:36	9:21	15:00	21:34
			15.8	3.6	15.3	4.1
☽	M	16	3:26	10:04	15:52	22:21
			15.5	3.6	15.0	4.1
E	Tu	17	4:20	10:52	16:52	23:18
			15.3	3.6	14.7	4.1
	W	18	5:21	11:50	17:58	. . .
			15.1	3.5	14.6	. . .
	Th	19	0:18	6:30	12:51	19:08
			4.0	15.3	3.2	15.0
	F	20	1:18	7:40	13:56	20:15
			3.5	15.8	2.8	15.7
	S	21	2:26	8:42	15:04	21:11
			3.0	16.6	2.3	16.7
	S	22	3:34	9:36	16:10	22:01
			2.4	17.5	1.7	17.5
	M	23	4:34	10:25	17:05	22:48
			1.8	18.2	1.2	18.2
N	Tu	24	5:30	11:10	17:56	23:32
○			1.2	18.6	0.9	18.6
	W	25	6:19	11:54	18:42	. . .
			0.8	18.8	0.7	. . .
P	Th	26	0:14	7:06	12:36	19:27
			18.8	0.6	18.7	0.8
	F	27	0:57	7:52	13:20	20:13
			18.7	0.6	18.3	1.0
	S	28	1:41	8:40	14:06	21:00
			18.4	0.8	17.7	1.4
	S	29	2:29	9:26	14:54	21:49
			17.8	1.0	17.0	1.8
E	M	30	3:20	10:18	15:49	22:41
☾			17.1	1.5	16.1	2.3
	Tu	31	4:16	11:13	16:50	23:39
			16.3	2.1	15.3	2.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 9.1 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:00 5.2	8:15 22.4	14:34 5.2	20:45 23.3
	Tu	2	3:10 4.5	9:16 23.8	15:40 3.8	21:42 24.6
	W	3	4:12 3.2	10:09 25.2	16:40 2.3	22:35 25.8
N ○ P	Th	4	5:08 2.0	11:00 26.5	17:36 1.0	23:25 26.7
	F	5	6:01 1.0	11:45 27.3	18:26 0.2	. . . . .
	S	6	0:11 27.0	6:50 0.8	12:32 27.7	19:15 —0.3
	S	7	0:58 26.8	7:37 0.8	13:19 27.7	20:03 0.0
	M	8	1:45 26.3	8:25 1.7	14:06 27.0	20:50 0.3
	Tu	9	2:32 25.4	9:12 2.0	14:54 26.0	21:40 1.4
E	W	10	3:22 24.0	10:08 3.0	15:45 24.7	22:30 2.7
☾	Th	11	4:16 22.8	10:54 4.3	16:42 23.3	23:25 4.0
	F	12	5:18 21.7	11:52 5.3	17:46 22.0	. . . . .
	S	13	0:25 5.0	6:27 20.9	12:56 5.9	18:56 21.4
	S	14	1:30 5.5	7:37 20.9	14:04 5.9	20:06 21.4
	M	15	2:37 5.4	8:40 21.3	15:08 5.4	21:05 21.8
	Tu	16	3:38 5.0	9:31 22.0	16:05 4.5	21:55 22.4
S	W	17	4:31 4.2	10:16 22.8	16:54 3.5	22:49 23.0
A	Th	18	5:17 3.5	10:54 23.6	17:37 2.7	23:17 23.4
●	F	19	5:56 3.2	11:30 24.3	18:15 2.4	23:50 23.8
	S	20	6:32 3.2	12:02 24.8	18:48 2.2	. . . . .
	S	21	0:21 24.2	7:01 3.4	12:34 25.4	19:18 2.5
	M	22	0:51 24.6	7:27 3.8	13:04 25.8	19:46 2.7
	Tu	23	1:22 24.8	7:51 4.2	13:37 25.9	20:14 3.0
E	W	24	1:54 25.0	8:16 4.3	14:12 25.8	20:44 3.3
	Th	25	2:30 24.8	8:47 4.4	14:52 25.2	21:18 3.7
	F	26	3:12 24.2	9:26 4.6	15:36 24.4	22:01 4.3
☽	S	27	4:00 23.1	10:15 5.3	16:30 23.0	22:52 5.2
	S	28	5:00 21.8	11:16 6.0	17:36 21.6	23:58 6.3
	M	29	6:17 21.0	12:36 6.7	18:58 20.9	. . . . .
	Tu	30	1:22 6.7	7:43 21.2	14:10 6.4	20:24 21.6
N	W	31	2:51 6.0	8:57 22.6	15:30 4.6	21:31 23.2

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	4:04 4.3	9:57 24.4	16:35 2.5	22:28 24.8
P	F	2	5:02 2.3	10:50 26.3	17:28 0.5	23:18 26.3
○	S	3	5:53 0.6	11:36 27.7	18:16 —1.0	. . . . .
	S	4	0:08 27.3	6:37 —0.4	12:20 28.7	19:02 —1.7
	M	5	0:45 27.7	7:22 —0.6	13:03 28.8	19:44 —1.7
E	Tu	6	1:26 27.5	8:02 —0.2	13:44 28.4	20:25 —0.8
	W	7	2:06 26.7	8:44 0.9	14:25 27.3	21:06 0.6
	Th	8	2:48 25.4	9:26 2.4	15:07 25.6	21:50 2.4
	F	9	3:32 23.8	10:10 4.3	15:53 23.7	22:36 4.4
☾	S	10	4:20 21.9	11:00 5.8	16:48 21.6	23:32 6.2
	S	11	5:22 20.2	12:02 7.2	18:00 19.9	. . . . .
	M	12	0:40 7.4	6:40 19.4	13:20 7.6	19:24 19.4
S	Tu	13	2:00 7.6	8:08 19.4	14:38 7.2	20:41 19.7
A	W	14	3:15 6.8	9:07 20.5	15:44 5.7	21:38 20.8
	Th	15	4:12 5.5	9:56 21.9	16:36 4.3	22:25 21.6
	F	16	5:00 4.0	10:36 23.4	17:17 2.7	23:00 23.2
	S	17	5:37 3.0	11:12 24.7	17:54 1.7	23:34 24.4
●	S	18	6:10 2.4	11:44 25.8	18:26 1.1	. . . . .
	M	19	0:04 25.3	6:40 2.1	12:15 26.8	18:55 1.0
	Tu	20	0:32 26.0	7:04 2.2	12:45 27.2	19:21 1.1
E	W	21	1:00 26.5	7:29 2.4	13:16 27.5	19:48 1.5
	Th	22	1:32 26.6	7:54 2.6	13:49 27.1	20:16 2.0
	F	23	2:06 26.2	8:22 3.0	14:27 26.4	20:48 2.9
	S	24	2:44 25.4	9:00 3.9	15:06 25.0	21:28 4.0
☽	S	25	3:30 23.9	9:45 4.9	15:55 23.1	22:16 5.4
	M	26	4:25 22.0	10:46 6.1	17:02 21.1	23:24 7.0
N	Tu	27	5:42 20.4	12:15 7.2	18:35 19.9	. . . . .
	W	28	1:05 7.9	7:21 20.1	14:01 6.9	20:15 20.5
	Th	29	2:44 6.6	8:48 22.0	15:24 4.8	21:25 22.4

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	3:57 4.2	9:48 24.2	16:25 2.1	22:20 24.6
	S	2	4:52 1.8	10:38 26.5	17:15 —0.1	23:05 26.3
○	S	3	5:38 0.0	11:22 28.1	18:00 —1.8	23:47 27.8
E	M	4	6:20 —1.0	12:02 29.1	18:41 —2.5	. . . . .
	Tu	5	0:26 28.2	6:59 —1.2	12:41 29.5	19:20 —2.1
	W	6	1:02 28.0	7:36 —0.8	13:18 28.9	19:57 —1.0
	Th	7	1:38 27.2	8:12 0.8	13:54 27.6	20:33 0.8
	F	8	2:12 26.0	8:47 2.4	14:32 25.9	21:10 2.8
	S	9	2:50 24.3	9:26 4.3	15:10 23.8	21:48 5.0
☾	S	10	3:30 22.2	10:10 6.2	15:55 21.5	22:36 7.0
S	M	11	4:21 20.2	11:06 7.8	16:56 19.2	23:43 8.6
	Tu	12	5:35 18.6	12:28 8.7	18:28 18.0	. . . . .
A	W	13	1:16 9.1	7:11 18.2	14:01 8.2	20:08 18.8
	Th	14	2:42 8.1	8:32 19.6	15:34 6.8	21:11 19.8
	F	15	3:43 6.3	9:25 21.5	16:06 4.7	21:57 21.5
	S	16	4:28 4.5	10:07 23.4	16:47 2.9	22:35 23.2
	S	17	5:07 3.0	10:45 25.1	17:23 1.3	23:07 24.9
●	M	18	5:40 2.0	11:18 26.7	17:55 0.5	23:37 26.2
E	Tu	19	6:08 0.7	11:50 27.6	18:25 0.2	. . . . .
	W	20	0:07 27.0	6:37 1.2	12:21 28.2	18:54 0.3
	Th	21	0:38 27.6	7:08 1.3	12:54 28.2	19:23 0.5
	F	22	1:10 27.6	7:32 1.9	13:27 27.9	19:53 1.8
	S	23	1:45 27.0	8:04 2.5	14:04 26.8	20:27 2.9
	S	24	2:24 25.8	8:45 3.8	14:46 25.0	21:07 4.4
	M	25	3:09 24.0	9:38 5.0	15:37 22.8	21:58 6.0
N ☽	Tu	26	4:08 21.8	10:43 6.5	16:47 20.6	23:17 7.8
	W	27	5:29 20.1	12:17 7.2	18:27 19.3	. . . . .
P	Th	28	1:05 8.0	7:10 20.2	13:55 6.2	20:05 20.5
	F	29	2:37 6.2	8:34 22.2	15:10 4.1	21:13 22.6
	S	30	3:42 3.8	9:32 24.7	16:07 1.7	22:05 24.8
	S	31	4:32 1.3	10:20 26.8	16:55 —0.3	22:48 26.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the secondline of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 13.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	5:17 −0.2	11:02 28.2	17:37 −1.8	23:26 27.6
	Tu	2	5:57 −1.0	11:40 29.0	18:17 −2.0	. . . . .
	W	3	0:02 28.0	6:35 −1.0	12:15 29.0	18:54 −1.5
	Th	4	0:35 27.8	7:10 0.0	12:51 28.1	19:28 0.0
	F	5	1:08 27.0	7:43 1.2	13:25 27.0	20:02 1.8
	S	6	1:42 25.9	8:18 3.0	13:58 25.2	20:35 3.8
	S	7	2:15 24.2	8:52 4.8	14:34 23.5	21:10 5.8
S	M	8	2:52 22.6	9:31 6.2	15:15 21.5	21:50 7.5
☾	Tu	9	3:37 20.8	10:22 7.8	16:07 19.5	22:45 9.0
A	W	10	4:39 19.0	11:38 8.8	17:28 17.9	. . . . .
	Th	11	0:15 9.8	6:10 18.2	13:07 8.5	19:11 17.9
	F	12	1:47 9.0	7:40 19.2	14:22 7.1	20:26 19.4
	S	13	2:58 7.1	8:42 21.2	15:20 5.2	21:15 21.2
	S	14	3:43 5.2	9:28 23.3	16:04 3.3	21:55 23.2
E	M	15	4:24 3.6	10:08 25.1	16:43 1.9	22:31 25.0
	Tu	16	5:00 2.2	10:45 26.8	17:19 0.9	23:05 26.5
●	W	17	5:35 1.2	11:20 27.8	17:53 0.3	23:40 27.3
	Th	18	6:07 1.0	11:55 28.2	18:27 0.5	. . . . .
	F	19	0:13 27.9	6:41 1.1	12:32 28.2	19:00 1.0
	S	20	0:50 27.7	7:17 1.8	13:08 27.5	19:37 2.0
	S	21	1:28 27.0	7:56 2.5	13:50 26.2	20:16 3.2
N P	M	22	2:10 25.6	8:43 3.8	14:35 24.4	21:04 5.0
	Tu	23	3:00 23.8	9:40 5.0	15:30 22.3	22:06 6.3
☽	W	24	4:08 22.0	10:52 6.0	16:44 20.5	23:27 7.2
	Th	25	5:25 20.8	12:16 6.1	18:20 20.0	. . . . .
	F	26	0:55 7.0	6:56 21.1	13:37 5.1	19:48 21.1
	S	27	2:13 5.2	8:12 22.9	14:45 3.4	20:51 23.0
E	S	28	3:45 3.5	9:09 24.9	15:40 1.8	21:40 24.6
	M	29	4:06 1.8	9:55 26.2	16:30 0.2	22:24 26.0
	Tu	30	4:52 0.5	10:38 27.1	17:12 −0.6	23:01 26.8

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	5:33 0.0	11:17 27.8	17:53 −0.7	23:37 27.0
	Th	2	6:12 0.0	11:53 27.5	18:31 0.0	. . . . .
	F	3	0:10 26.8	6:48 1.0	12:28 26.8	19:07 1.2
	S	4	0:43 26.0	7:23 2.2	13:00 25.7	19:40 3.0
S	S	5	1:15 25.0	7:56 3.7	13:32 24.2	20:11 4.8
	M	6	1:48 24.0	8:30 5.0	14:07 23.0	20:43 6.2
A	Tu	7	2:25 22.8	9:08 6.1	14:46 21.6	21:20 7.5
	W	8	3:08 21.5	9:55 7.0	15:35 20.1	22:06 8.4
☾	Th	9	4:03 20.2	10:55 7.8	16:40 19.0	23:14 9.0
	F	10	5:14 19.5	12:06 7.8	18:02 18.7	. . . . .
	S	11	0:33 8.8	6:35 20.0	13:15 7.0	19:21 19.6
	S	12	1:42 7.5	7:45 21.2	14:17 5.8	20:21 21.1
E	M	13	2:41 6.0	8:40 23.0	15:10 4.2	21:09 23.0
	Tu	14	3:32 4.5	9:28 24.7	15:57 3.0	21:51 24.7
	W	15	4:17 3.1	10:11 26.0	16:41 1.9	22:32 26.0
●	Th	16	5:01 2.0	10:51 27.0	17:23 1.3	23:12 27.0
	F	17	5:42 1.4	11:32 27.4	18:05 1.2	23:52 27.4
	S	18	6:25 1.8	12:14 27.4	18:47 1.7	. . . . .
N P	S	19	0:34 27.2	7:10 1.6	12:56 26.8	19:31 2.3
	M	20	1:17 26.7	7:57 2.2	13:41 25.8	20:19 3.4
	Tu	21	2:05 25.7	8:50 3.0	14:32 24.2	21:12 3.4
	W	22	2:58 24.2	9:46 3.9	15:30 22.8	22:13 5.2
☽	Th	23	4:00 23.0	10:52 4.4	16:40 21.5	23:20 5.6
	F	24	5:14 22.1	11:59 4.5	18:00 21.1	. . . . .
E	S	25	0:31 5.4	6:30 22.2	13:07 4.1	19:16 21.8
	S	26	1:40 4.8	7:40 23.1	14:10 3.4	20:20 22.9
	M	27	2:40 3.9	8:40 24.2	15:09 2.5	21:11 23.9
	Tu	28	3:36 2.8	9:30 25.1	16:00 1.8	21:58 24.8
	W	29	4:25 2.0	10:14 25.7	16:48 1.1	22:38 25.1
○	Th	30	5:10 1.5	10:55 25.8	17:32 1.2	23:15 25.2
	F	31	5:53 1.6	11:33 25.5	18:14 1.8	23:50 25.1

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	6:32 2.0	12:09 25.0	18:51 2.8	. . . . .
	S	2	0:24 24.9	7:10 3.0	12:41 24.2	19:26 4.0
	M	3	0:56 24.3	7:44 4.0	13:14 23.6	19:58 5.1
A	Tu	4	1:30 23.9	8:19 4.8	13:50 22.9	20:29 6.1
	W	5	2:06 23.1	8:54 5.4	14:27 22.1	21:08 6.9
	Th	6	2:46 22.6	9:34 6.0	15:10 21.5	21:40 7.2
	F	7	3:34 22.0	10:20 6.1	16:01 20.9	22:26 7.4
☾	S	8	4:29 21.5	11:10 6.2	17:03 20.4	23:21 7.3
E	S	9	5:33 21.1	12:07 6.1	18:11 20.5	. . . . .
	M	10	0:26 7.0	6:41 21.5	13:06 5.8	19:20 21.2
	Tu	11	1:32 6.4	7:47 22.4	14:10 5.1	20:20 22.2
	W	12	2:36 5.4	8:46 23.6	15:10 4.3	21:13 23.7
	Th	13	3:36 4.1	9:38 24.8	16:06 3.4	22:03 24.9
	F	14	4:31 3.0	10:28 25.6	16:58 2.6	22:50 26.0
● N	S	15	5:24 2.0	11:14 26.3	17:50 2.0	23:37 26.8
P	S	16	6:15 1.4	12:00 26.6	18:39 1.9	. . . . .
	M	17	0:23 27.0	7:06 1.1	12:48 26.4	19:27 2.0
	Tu	18	1:10 26.9	7:55 1.1	13:36 25.9	20:18 2.3
	W	19	1:59 26.4	8:46 1.5	14:27 25.0	21:09 2.8
	Th	20	2:51 25.5	9:39 2.0	15:22 24.0	22:02 3.4
☽	F	21	3:47 24.6	10:33 2.6	16:21 23.0	22:58 4.0
E	S	22	4:47 23.8	11:30 3.1	17:26 22.1	23:58 4.5
	S	23	5:54 23.0	12:30 3.8	18:35 21.9	. . . . .
	M	24	1:00 4.8	7:00 22.8	13:32 4.0	19:41 22.1
	Tu	25	2:04 4.6	8:06 23.0	14:35 4.0	20:40 22.6
	W	26	3:05 4.1	9:04 23.3	15:34 3.6	21:30 23.1
	Th	27	4:01 3.6	9:58 23.7	16:28 3.1	22:16 23.7
	F	28	4:52 3.0	10:38 23.9	17:17 2.9	22:57 24.0
S ○	S	29	5:38 2.6	11:18 23.9	18:00 3.0	23:35 24.1
	S	30	6:20 2.6	11:56 23.8	18:40 3.3	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 13.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.), and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	0:06	6:58	12:29	19:16
			24.1	2.9	23.5	3.9
A	Tu	2	0:42	7:32	13:00	19:46
			24.2	3.3	23.4	4.6
	W	3	1:14	8:04	13:33	20:12
			24.2	3.9	23.4	5.2
	Th	4	1:48	8:34	14:07	20:39
			24.2	4.2	23.2	5.7
	F	5	2:25	9:06	14:44	21:09
			24.1	4.5	23.1	5.8
E	S	6	3:06	9:40	15:27	21:44
			23.9	4.6	22.9	5.8
☾	S	7	3:50	10:21	16:15	22:30
			23.4	4.9	22.3	5.9
	M	8	4:42	11:9	17:12	23:24
			22.8	5.1	21.8	6.0
	Tu	9	5:43	12:06	18:20	. . .
			22.0	5.5	21.4	. . .
	W	10	0:30	6:54	13:14	19:32
			6.1	21.8	5.9	21.6
	Th	11	1:46	8:07	14:27	20:40
			6.0	22.2	5.6	22.6
	F	12	3:04	9:11	15:39	21:40
			5.1	23.2	4.8	24.0
N	S	13	4:13	10:10	16:42	22:35
			3.8	24.4	3.4	25.4
●	S	14	5:12	11:02	17:40	23:25
			2.1	25.5	2.2	26.5
P	M	15	6:06	11:52	18:30	. . .
			0.9	26.2	1.2	. . .
	Tu	16	0:12	6:56	12:39	19:18
			27.4	0.0	26.7	0.8
	W	17	0:59	7:43	13:26	20:05
			27.8	—0.4	26.7	0.8
	Th	18	1:46	8:30	14:11	20:50
			27.7	—0.2	26.2	1.2
E	F	19	2:33	9:16	15:00	21:36
			27.0	0.3	25.3	2.0
	S	20	3:21	10:04	15:50	22:26
			26.0	1.4	24.1	3.1
☽	S	21	4:13	10:54	16:44	23:20
			24.5	2.9	22.9	4.2
	M	22	5:12	11:50	17:47	. . .
			23.0	4.1	21.7	. . .
	Tu	23	0:20	6:18	12:54	18:57
			5.3	22.0	5.2	21.0
	W	24	1:26	7:30	14:02	20:07
			5.9	21.4	5.7	21.1
	Th	25	2:36	8:40	15:11	21:07
			5.7	21.5	5.4	21.7
S	F	26	3:41	9:36	16:11	21:58
			4.9	21.0	4.6	22.4
	S	27	4:36	10:25	17:01	22:42
			2.9	22.5	3.9	23.1
	S	28	5:24	11:06	17:45	23:20
			3.0	23.0	3.2	24.0
♀ ☌	M	29	6:05	11:42	18:23	23:54
			2.3	23.3	3.0	24.6
	T	30	6:41	12:14	18:56	. . .
			2.1	23.9	3.1	. . .
	W	31	0:25	7:13	12:43	19:25
			25.0	2.2	24.1	3.5

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:56	7:40	13:12	19:48
			25.4	2.6	24.6	4.0
E	F	2	1:26	8:06	13:42	20:10
			25.8	2.9	24.9	4.2
	S	3	2:00	8:33	14:15	20:35
			25.9	3.1	24.9	4.2
	S	4	2:34	9:02	14:52	21:08
			25.5	3.6	24.5	4.4
	M	5	3:15	9:37	15:36	21:50
			24.9	4.0	23.9	4.8
☾	Tu	6	4:01	10:22	16:28	22:43
			23.7	4.6	22.7	5.4
	W	7	5:00	11:18	17:34	23:50
			22.2	5.7	21.5	6.1
	Th	8	6:13	12:30	18:54	. . .
			21.1	6.6	20.9	. . .
N	F	9	1:18	7:40	14:02	20:20
			6.6	21.0	6.9	21.8
	S	10	2:48	8:57	15:26	21:27
			5.8	22.0	5.4	23.4
	S	11	4:02	9:58	16:32	22:22
			3.8	23.9	3.4	25.2
P ●	M	12	5:01	10:52	17:28	23:12
			1.6	25.4	1.6	27.0
	Tu	13	5:52	11:40	18:15	23:58
			—0.1	26.8	0.1	28.2
	W	14	6:38	12:24	19:00	. . .
			—1.4	27.6	—0.4	. . .
E	Th	15	0:42	7:22	13:06	19:41
			28.9	—1.6	27.8	—0.4
	F	16	1:24	8:05	13:46	20:23
			28.8	—1.8	27.2	0.3
	S	17	2:06	8:48	14:28	21:06
			28.0	—0.2	26.2	1.6
	S	18	2:49	9:30	15:13	21:50
			26.5	1.5	24.8	3.1
☽	M	19	3:34	10:18	16:00	22:40
			24.6	3.4	23.0	4.8
	Tu	20	4:26	11:10	16:58	23:40
			22.6	5.2	21.1	6.2
	W	21	5:33	12:15	18:12	. . .
			20.8	6.8	20.0	. . .
S	Th	22	0:52	6:54	13:32	19:34
			7.0	19.8	7.2	19.8
	F	23	2:11	8:15	14:48	20:45
			6.9	20.0	6.8	20.6
	S	24	3:20	9:20	15:50	21:38
			5.8	20.8	5.6	21.9
A	S	25	4:16	10:08	16:41	22:21
			4.2	21.9	4.1	23.1
	M	26	5:00	10:48	17:22	22:58
			2.9	23.0	3.1	24.4
○	Tu	27	5:40	11:20	17:57	23:31
			1.8	23.9	2.4	25.4
	W	28	6:13	11:50	18:28	. . .
			1.2	24.8	2.2	. . .
	Th	29	0:00	6:43	12:19	18:53
			26.1	1.2	25.4	2.5
E	F	30	0:30	7:10	12:46	19:16
			26.8	1.5	26.0	2.9
	S	31	1:00	7:34	13:15	19:39
			27.0	2.0	26.1	3.1

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:30	7:59	13:46	20:04
			27.0	2.4	26.0	3.3
	M	2	2:05	8:27	14:22	20:37
			26.8	3.0	25.5	3.8
	Tu	3	2:44	9:04	15:06	21:20
			25.2	3.9	24.3	4.5
☾	W	4	3:30	9:47	15:55	22:17
			23.8	5.0	22.8	5.6
	Th	5	4:28	10:46	17:04	23:32
			21.9	6.4	21.0	6.9
N	F	6	5:49	12:12	18:34	. . .
			20.1	7.6	20.2	. . .
	S	7	1:13	7:28	13:56	20:08
			7.0	20.2	7.2	21.5
	S	8	2:43	8:48	15:18	21:15
			5.5	21.8	5.2	23.7
P	M	9	3:51	9:48	16:29	22:08
			3.0	24.0	2.8	25.9
	Tu	10	4:45	10:38	17:10	22:55
			0.8	26.0	0.8	27.8
●	W	11	5:22	11:22	17:53	23:38
			—1.0	27.3	—0.7	29.0
E	Th	12	6:15	12:02	18:06	. . .
			—2.0	28.2	—0.8	. . .
	F	13	0:18	6:56	12:40	19:15
			29.4	—2.0	28.2	—0.8
	S	14	0:57	7:35	13:18	19:53
			29.0	—1.2	27.7	0.3
	S	15	1:35	8:15	13:55	20:32
			28.0	—0.7	26.4	2.0
	M	16	2:15	8:55	14:35	21:14
			26.2	2.2	24.8	3.8
	Tu	17	2:57	9:38	15:18	22:02
			24.2	4.3	22.8	5.4
☽	W	18	3:43	10:30	16:10	23:00
S			22.0	6.3	20.08	7.0
	Th	19	4:45	11:36	17:23	. . .
			19.8	8.0	19.02	. . .
	F	20	0:17	6:13	13:00	18:58
			7.8	18.4	8.2	18.08
A	S	21	1:42	7:48	14:20	20:13
			7.5	18.8	7.5	20.0
	S	22	2:52	8:54	15:21	21:08
			6.2	20.0	6.1	21.7
	M	23	3:45	9:40	16:09	21:51
			4.5	21.6	4.5	23.02
	Tu	24	4:28	10:18	16:48	22:28
			3.0	23.1	3.0	24.9
	W	25	5:05	10:50	17:27	23:00
			1.8	24.5	2.1	26.1
E ○	Th	26	5:38	11:20	17:52	23:32
			1.0	25.7	1.9	27.0
	F	27	6:08	11:49	18:18	. . .
			0.8	26.3	1.9	. . .
	S	28	0:02	6:35	12:19	18:45
			27.6	1.0	27.0	2.0
	S	29	0:33	7:02	12:49	19:12
			27.8	1.7	27.0	2.4
	M	30	1:05	7:30	13:22	19:42
			27.2	2.2	26.6	3.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 13.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:40	8:00	14:00	20:18
			26.4	3.2	25.7	3.8
	W	2	2:23	8:40	14:42	21:06
			25.0	4.4	24.2	2.2
N ☾	Th	3	3:10	9:28	15:38	22:10
			23.2	6.0	22.3	6.2
	F	4	4:12	10:38	16:50	23:37
			21.0	7.3	20.8	7.0
	S	5	5:40	12:18	18:27	. . .
			19.7	8.0	20.2	. . .
	S	6	1:12	7:21	13:53	19:55
			6.5	20.0	6.8	21.8
P	M	7	2:31	8:38	15:04	21:00
			4.5	22.0	4.5	24.0
	Tu	8	3:32	9:32	15:59	21:50
			2.2	24.2	2.2	26.2
E	W	9	4:23	10:20	16:46	22:35
			0.1	26.2	0.1	28.0
●	Th	10	5:06	11:00	17:28	23:15
			−1.2	27.5	−0.8	29.0
	F	11	5:50	11:38	18:09	23:53
			−1.8	28.0	−1.0	29.0
	S	12	6:30	12:15	18:47	. . .
			−1.4	28.0	−0.1	. . .
	S	13	0:30	7:08	12:49	19:25
			28.4	−0.2	27.2	1.0
	M	14	1:07	7:45	13:25	20:03
			27.2	1.4	26.0	2.4
	Tu	15	1:43	8:24	14:02	20:43
			25.5	3.3	24.4	4.2
S	W	16	2:22	9:05	14:42	21:30
			23.6	5.3	22.8	6.0
	Th	17	3:07	9:52	15:30	22:27
			21.5	7.2	21.0	7.2
☽	F	18	4:02	10:56	16:35	23:40
			19.5	8.6	19.2	8.0
A	S	19	5:24	12:17	18:03	. . .
			18.0	9.0	18.7	. . .
	S	20	0:58	7:00	13:35	19:25
			7.8	18.2	8.1	19.7
	M	21	2:07	8:12	14:36	20:25
			6.6	19.8	6.8	21.3
	Tu	22	3:00	9:00	15:28	21:12
			5.0	21.2	5.0	23.2
E	W	23	3:44	9:38	16:05	21:50
			3.3	23.0	3.8	25.0
	Th	24	4:23	10:13	16:40	22:17
			2.1	24.6	2.5	26.2
	F	25	4:59	10:46	17:14	23:00
			1.2	26.0	2.0	27.0
○	S	26	5:32	11:18	17:47	23:35
			1.0	26.8	1.7	27.7
	S	27	6:05	11:52	18:18	. . .
			1.2	27.2	1.8	. . .
	M	28	0:10	6:37	12:27	18:52
			27.6	1.8	27.2	2.2
	Tu	29	0:45	7:11	13:03	19:31
			27.0	2.5	26.8	2.9
N	W	30	1:24	7:50	13:45	20:15
			26.0	3.8	25.6	4.0
	Th	31	2:08	8:35	14:32	21:11
			24.6	5.0	24.0	5.0

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	3:00	9:32	15:32	22:20
			22.8	6.3	22.3	6.0
☾	S	2	4:07	10:48	16:46	23:40
			21.0	7.2	21.0	6.1
P	S	3	5:37	12:16	18:15	. . .
			20.0	7.0	21.0	. . .
	M	4	1:00	7:07	13:35	19:35
			5.3	20.8	5.8	22.5
E	Tu	5	2:09	8:17	14:40	20:37
			4.0	22.5	4.0	24.3
	W	6	3:07	9:10	15:34	21:28
			2.1	24.2	2.2	26.0
	Th	7	3:58	9:55	16:22	22:12
			0.8	25.8	0.8	27.2
	F	8	4:45	10:36	17:05	22:58
			−0.3	26.8	0.0	27.8
●	S	9	5:27	11:15	17:47	23:32
			−0.6	27.1	0.0	27.8
	S	10	6:08	11:50	18:27	. . .
			0.0	27.0	0.7	. . .
	M	11	0:08	6:47	12:25	19:05
			27.0	1.0	26.2	1.8
S	Tu	12	0:43	7:25	13:02	19:43
			26.0	2.5	25.3	3.0
	W	13	1:20	8:02	13:37	20:22
			24.7	4.2	24.1	4.5
	Th	14	1:57	8:40	14:15	21:06
			23.0	6.0	22.8	6.0
	F	15	2:38	9:22	15:00	21:55
			21.6	7.2	21.5	6.9
A ☽	S	16	3:27	10:14	15:54	22:54
			20.0	8.2	20.2	7.3
	S	17	4:51	11:17	17:02	23:58
			19.0	8.6	20.3	7.2
	M	18	5:50	12:25	18:18	. . .
			18.7	8.2	20.0	. . .
	Tu	19	1:02	7:04	13:28	19:27
			6.8	19.4	7.3	21.0
E	W	20	2:00	8:03	14:24	20:22
			5.8	21.0	6.1	22.7
	Th	21	2:51	8:50	15:12	21:08
			4.5	22.5	4.8	24.0
	F	22	3:37	9:33	15:57	21:50
			3.3	24.0	3.4	25.4
	S	23	4:20	10:12	16:38	22:31
			2.3	25.4	2.5	26.3
○	S	24	5:00	10:51	17:20	23:11
			1.9	26.5	1.9	27.0
	M	25	5:40	11:31	18:02	23:52
			1.8	27.0	1.8	27.1
N	Tu	26	6:21	12:11	18:44	. . .
			2.0	27.1	1.9	. . .
	W	27	0:32	7:04	12:58	19:30
			26.8	2.5	26.8	2.2
P	Th	28	1:16	7:49	13:39	20:20
			26.0	3.4	26.0	3.0
	F	29	2:05	8:40	14:29	21:16
			24.7	4.8	24.8	3.8
	S	30	3:00	9:38	15:27	22:18
			24.2	5.2	23.6	4.2

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	4:02	10:45	16:34	23:24
			22.0	5.8	22.5	4.5
	M	2	5:18	11:54	17:50	. . .
			21.2	5.8	22.0	. . .
E	Tu	3	0:32	6:35	13:04	19:02
			4.2	21.3	5.0	22.8
	W	4	1:37	7:45	14:08	20:07
			3.8	22.5	4.1	24.0
	Th	5	2:36	8:42	15:05	21:08
			3.0	23.7	3.1	24.9
	F	6	3:32	9:32	15:58	21:52
			2.0	24.6	2.1	25.6
	S	7	4:22	10:15	16:46	22:35
			1.3	25.3	1.4	26.0
●	S	8	5:10	10:56	17:31	23:16
			1.0	25.8	1.1	26.0
S	M	9	5:58	11:34	18:14	23:52
			1.3	25.8	1.4	25.5
	Tu	10	6:34	12:10	18:53	. . .
			2.0	25.5	2.1	. . .
	W	11	0:28	7:12	12:44	19:31
			24.9	3.1	25.0	3.0
	Th	12	1:04	7:48	13:19	20:09
			24.0	4.4	24.2	4.0
	F	13	1:38	8:22	13:55	20:45
			23.1	5.4	23.6	5.0
A	S	14	2:15	8:55	14:33	21:24
			22.4	6.5	22.9	5.8
	S	15	2:56	9:32	15:18	22:06
			21.6	7.1	22.1	6.1
☽	M	16	3:44	10:15	16:09	22:52
			20.9	7.6	21.5	6.4
E	Tu	17	4:40	11:06	17:08	23:48
			20.3	7.7	21.0	6.5
	W	18	5:45	12:05	18:15	. . .
			20.1	7.4	21.0	. . .
	Th	19	0:46	6:54	13:09	19:23
			6.4	20.6	7.0	21.6
	F	20	14:6	7:58	14:12	20:25
			5.9	21.5	6.0	22.8
	S	21	2:47	8:53	15:14	21:18
			5.0	22.9	4.9	23.9
	S	22	3:44	9:43	16:10	22:08
			4.0	24.2	3.5	25.0
	M	23	4:36	10:30	17:02	22:55
			3.0	25.5	2.4	26.0
N ○	Tu	24	5:26	11:15	17:52	23:40
			2.4	26.5	1.5	26.5
	W	25	6:14	12:00	18:40	. . .
			2.0	27.1	1.1	. . .
P	Th	26	0:24	7:01	12:46	19:28
			26.6	1.9	27.2	1.0
	F	27	1:10	7:49	13:32	20:16
			26.4	2.1	27.0	1.1
	S	28	1:58	8:38	14:21	21:07
			25.6	2.6	26.2	1.8
	S	29	2:50	9:29	15:14	22:00
			24.8	3.2	25.2	2.4
E ☾	M	30	3:44	10:22	16:10	22:55
			23.6	4.0	24.1	3.1
	Tu	31	4:45	11:21	17:15	23:55
			22.4	4.6	23.1	4.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 13.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	2:11 1.8	9:01 8.7	14:37 2.0	21:28 9.2
	Tu	2	3:12 1.7	10:06 9.3	15:42 1.6	22:32 9.7
	W	3	4:14 1.3	11:00 10.0	16:43 1.0	23:29 10.2
N ○ P	Th	4	5:10 0.9	11:51 10.6	17:40 0.4	. . . . .
	F	5	0:21 10.7	6:04 0.5	12:40 11.2	18:33 —0.1
	S	6	1:12 11.0	6:54 0.2	13:28 11.6	19:23 —0.5
	S	7	2:01 11.2	7:42 0.0	14:17 11.8	20:14 —0.6
	M	8	2:50 11.2	8:30 0.0	15:04 11.8	21:02 —0.6
	Tu	9	3:38 11.0	9:16 0.2	15:52 11.6	21:50 —0.3
E	W	10	4:28 10.6	10:04 0.5	16:42 11.2	22:40 0.2
☾	Th	11	5:18 10.1	10:52 1.0	17:35 10.7	23:30 0.8
	F	12	6:12 9.6	11:42 1.5	18:30 10.1	. . . . .
	S	13	0:21 1.4	7:10 9.2	12:38 2.0	19:30 9.6
	S	14	1:16 2.0	8:09 9.0	13:36 2.8	20:33 9.3
	M	15	2:14 2.8	9:08 8.9	14:38 2.5	21:35 9.1
	Tu	16	3:10 2.5	10:08 9.1	15:38 2.5	22:34 9.2
S	W	17	4:02 2.5	10:58 9.4	16:32 2.2	23:24 9.3
A	Th	18	4:50 2.2	11:38 9.7	17:20 1.9	. . . . .
●	F	19	0:09 9.4	5:33 1.9	12:20 10.0	18:04 1.5
	S	20	0:49 9.6	6:12 1.6	12:57 10.3	18:44 1.2
	S	21	1:24 9.6	6:52 1.3	13:33 10.4	19:21 0.9
	M	22	1:58 9.7	7:28 1.1	14:09 10.5	19:59 0.6
	Tu	23	2:30 9.6	8:07 0.9	14:44 10.4	20:36 0.5
E	W	24	3:05 9.6	8:45 0.9	15:20 10.2	21:16 0.5
	Th	25	3:43 9.4	9:25 1.0	15:59 9.9	21:59 0.7
	F	26	4:28 9.2	10:09 1.3	16:42 9.5	22:44 1.0
☽	S	27	5:10 8.8	10:56 1.6	17:30 9.1	23:34 1.4
	S	28	6:06 8.5	11:51 1.9	18:32 8.7	. . . . .
	M	29	0:30 1.8	7:15 8.3	12:56 2:2	19:48 8.5
	Tu	30	1:35 2.1	8:31 8.5	14:07 2.3	21:07 8.8
N	W	31	2:06 2.1	9:42 9.1	15:21 2.0	22:18 9.3

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:54 1.8	10:44 9.9	16:30 1.5	23:18 10.0
P	F	2	4:56 1.3	11:38 10.7	17:28 0.6	. . . . .
○	S	3	0:12 10.6	5:50 0.7	12:26 11.5	18:20 —0.1
	S	4	1:00 11.2	6:40 0.1	13:13 12.1	19:10 —0.7
	M	5	1:46 11.5	7:25 —0.3	13:58 12.4	19:56 —0.9
E	Tu	6	2:30 11.6	8:09 —0.4	14:42 12.4	20:41 —0.9
	W	7	3:14 11.3	8:52 —0.3	15:26 12.1	20:25 —0.6
	Th	8	3:56 10.9	9:35 0.1	16:12 11.5	22:09 0.0
	F	9	4:41 10.3	10:20 0.6	17:00 10.7	22:52 0.6
☾	S	10	5:30 9.7	11:05 1.2	17:52 9.9	23:38 1.4
	S	11	6:22 9.0	11:55 1.9	18:50 9.1	. . . . .
	M	12	0:29 2.2	7:23 8.6	12:51 2.5	19:56 8.6
S	Tu	13	1:25 2.7	8:28 8.5	13:56 2.9	21:06 8.4
A	W	14	2:26 3.0	9:30 8.6	15:05 3.0	22:10 8.5
	Th	15	3:28 3.0	10:27 9.0	16:06 2.7	23:04 8.8
	F	16	4:22 2.7	11:15 9.5	16:59 2.3	23:48 9.1
	S	17	5:10 2.2	11:57 10.0	17:42 1.7	. . . . .
●	S	18	0:27 9.5	5:50 1.7	12:35 10.4	18:22 1.2
	M	19	1:02 8.7	6:30 1.2	13:10 10.7	18:59 1.3
	Tu	20	1:34 10.0	7:07 0.7	13:45 10.8	19:35 0.3
E	W	21	2:06 10.1	7:44 0.5	14:20 10.8	20:12 0.1
	Th	22	2:40 10.0	8:22 0.4	14:55 10.6	20:50 0.1
	F	23	3:16 9.9	9:01 0.5	15:32 10.3	21:32 0.4
	S	24	3:55 9.5	9:44 0.8	16:15 9.8	22:16 0.8
☽	S	25	4:40 9.1	10:30 1.3	17:04 9.2	23:05 1.4
	M	26	5:35 8.6	11:25 1.8	18:07 8.6	. . . . .
N	Tu	27	0:02 2.0	6:50 8.3	12:32 2.2	19:29 8.3
	W	28	1:11 2.4	8:11 8.5	13:49 2.4	20:55 8.6
	Th	29	2:26 2.5	9:25 9.1	15:08 2.1	22:07 9.2

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	3:39 2.1	10:27 10.0	16:16 1.4	23:06 10.0
	S	2	4:40 1.4	11:20 10.0	17:16 0.6	23:57 10.7
○	S	3	5:34 0.7	12:08 11.8	18:04 —0.2	. . . . .
E	M	4	0:42 11.3	6:20 0.0	12:54 12.3	18:50 —0.7
	Tu	5	1:25 11.6	7:02 —0.4	13:36 12.6	19:32 —0.9
	W	6	2:05 11.7	7:44 —0.6	14:17 12.5	20:14 —0.9
	Th	7	2:44 11.4	8:24 —0.5	15:00 12.1	20:54 —0.5
	F	8	3:24 11.0	9:05 —0.1	15:42 11.4	21:34 0.0
	S	9	4:05 10.3	9:46 0.4	16:26 10.5	22:14 0.8
☾	S	10	4:48 9.6	10:30 1.1	17:15 9.5	22:58 1.5
S	M	11	5:38 8.9	11:17 1.9	18:10 8.7	23:44 2.3
	Tu	12	6:38 8.4	12:13 2.6	19:17 8.1	. . . . .
A	W	13	0:39 2.9	7:46 8.2	13:16 3.0	20:32 7.9
	Th	14	1:42 3.2	8:56 8.4	14:29 3.2	21:40 8.1
	F	15	2:48 3.2	9:55 8.8	15:34 2.9	22:35 8.5
	S	16	3:49 2.8	10:45 9.4	16:27 2.4	23:18 9.0
	S	17	4:40 2.2	11:28 10.0	17:12 1.7	23:56 9.5
●	M	18	5:21 1.6	12:07 10.5	17:52 1.1	. . . . .
E	Tu	19	0:31 9.9	6:02 1.0	12:42 10.9	18:30 0.5
	W	20	1:05 10.2	6:41 0.5	13:18 11.0	19:08 0.1
	Th	21	1:40 10.4	7:20 0.2	13:54 11.0	19:46 —0.1
	F	22	2:15 10.3	8:00 0.1	14:32 10.8	20:27 0.0
	S	23	2:53 10.1	8:40 0.3	15:13 10.4	21:08 0.3
	S	24	3:35 9.8	9:25 0.7	15:57 9.8	21:53 0.9
	M	25	4:22 9.3	10:14 1.2	16:51 9.2	22:44 1.5
N ☽	Tu	26	5:21 8.8	11:11 1.7	17:59 8.6	23:42 2.2
	W	27	6:35 8.6	12:20 2.2	19:22 8.4	. . . . .
P	Th	28	0:54 2.6	7:55 8.8	13:38 2.3	20:44 8.7
	F	29	2:11 2.6	9:07 9.4	14:54 2.0	21:52 9.3
	S	30	3:22 2.1	10:08 10.2	16:00 1.4	22:48 10.0
	S	31	4:20 1.4	11:00 11.1	16:55 0.6	23:35 10.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	5:10	11:46	17:41	. . .
			0.7	11.8	0.0	. . .
	Tu	2	0:18	5:54	12:30	18:25
			11.2	0.1	12.2	—0.4
	W	3	0:58	6:36	13:11	19:06
			11.5	—0.3	12.3	—0.6
	Th	4	1:36	7:17	13:52	19:45
			11.5	—0.4	12.1	—0.5
	F	5	2:14	7:56	14:33	20:23
			11.2	—0.3	11.7	—0.2
	S	6	2:52	8:35	15:14	21:00
			10.8	0.0	10.9	0.4
	S	7	3:32	9:16	15:57	21:39
			10.2	0.5	10.1	1.0
S	M	8	4:15	10:00	16:42	22:20
			9.6	1.2	9.2	1.7
☾	Tu	9	5:01	10:47	17:35	23:06
			9.0	1.3	8.4	2.3
A	W	10	5:58	11:40	18:38	23:57
			8.5	2.5	8.1	2.9
	Th	11	7:04	12:40	19:50	. . .
			8.2	2.9	7.7	. . .
	F	12	1:00	8:12	13:47	20:57
			3.1	8.4	3.0	7.9
	S	13	2:07	9:14	14:51	21:52
			3.1	8.8	2.8	8.4
	S	14	3:06	10:06	15:45	22:39
			2.7	9.3	2.2	8.9
E	M	15	4:02	10:50	16:34	23:20
			2.1	9.9	1.6	9.4
	Tu	16	4:48	11:32	17:17	23:57
			1.5	10.4	1.0	9.9
●	W	17	5:30	12:11	18:00	. . .
			0.9	10.7	0.4	. . .
	Th	18	0:34	6:13	12:52	18:40
			10.8	0.4	11.0	0.1
	F	19	1:13	6:56	13:31	19:21
			10.5	0.1	11.0	0.0
	S	20	1:52	7:38	14:14	20:04
			10.5	0.0	10.8	0.1
	S	21	2:35	8:22	14:59	20:49
			10.3	0.2	10.4	0.4
N P	M	22	3:20	9:12	15:50	21:38
			10.0	0.5	9.8	1.0
	Tu	23	4:12	10:05	16:47	22:30
			9.6	1.0	9.3	1.6
☽	W	24	5:14	11:05	18:57	23:32
			9.2	1.5	8.9	2.1
	Th	25	6:24	12:12	19:12	. . .
			9.1	1.9	8.8	. . .
	F	26	0:41	7:35	13:25	20:25
			2.4	9.3	2.0	9.0
	S	27	1:58	8:41	14:34	21:28
			2.4	9.8	1.8	9.5
E	S	28	2:58	9:40	15:35	22:21
			2.0	10.3	1.3	10.0
	M	29	3:54	10:33	16:27	23:06
			1.4	11.0	0.8	10.5
	Tu	30	4:43	11:20	17:14	23:51
			0.9	11.4	0.4	10.9

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	5:27	12:05	17:57	. . .
			0.4	11.7	0.2	. . .
	Th	2	0:30	6:10	12:48	18:37
			11.0	0.1	11.7	0.1
	F	3	1:08	6:50	13:29	19:14
			11.0	0.0	11.4	0.2
	S	4	1:47	7:30	14:10	19:52
			10.8	0.1	11.0	0.4
S	S	5	2:25	8:10	14:50	20:30
			10.5	0.3	10.4	0.8
	M	6	3:04	8:51	15:32	21:08
			10.1	0.7	9.7	1.2
A	Tu	7	3:46	9:34	16:15	21:49
			9.6	1.2	9.0	1.7
	W	8	4:31	10:20	17:03	22:34
			9.1	1.7	8.4	2.2
☾	Th	9	5:23	11:10	17:59	23:24
			8.7	2.1	8.0	2.6
	F	10	6:22	12:05	19:02	. . .
			8.5	2.4	7.8	. . .
	S	11	0:22	7:25	13:05	20:05
			2.8	8.5	2.6	8.0
	S	12	1:22	8:25	14:04	21:02
			2.8	8.7	2.4	8.3
E	M	13	2:23	9:20	15:00	21:53
			2.5	9.1	2.1	8.8
	Tu	14	3:20	10:10	15:58	22:33
			2.0	9.6	1.6	9.3
	W	15	4:12	10:57	16:40	23:32
			1.5	10.0	1.0	9.3
●	Th	16	5:00	11:42	17:28	. . .
			0.9	10.4	0.6	. . .
	F	17	0:06	5:48	12:27	18:14
			10.3	0.5	10.7	0.3
	S	18	0:50	6:35	13:13	19:00
			10.5	0.2	10.8	0.2
N P	S	19	1:35	7:23	14:00	19:47
			1.07	0.0	10.7	0.3
	M	20	2:21	8:12	14:50	20:35
			10.6	0.1	10.4	0.5
	Tu	21	3:12	9:03	15:45	21:26
			10.4	0.3	10.1	0.9
	W	22	4:05	9:58	16:43	22:20
			10.2	0.6	9.7	1.3
☽	Th	23	5:03	10:58	17:47	23:20
			10.0	1.0	9.4	1.7
	F	24	6:05	12:00	18:32	. . .
			9.9	1.3	9.3	. . .
E	S	25	0:21	7:10	13:08	19:56
			2.0	9.9	1.5	9.3
	S	26	1:25	8:12	14:05	20:56
			2.0	10.1	1.5	9.6
	M	27	2:25	9:10	15:04	21:50
			1.9	10.3	1.4	9.8
	Tu	28	3:22	10:05	15:57	22:28
			1.6	10.6	1.3	10.1
	W	29	4:13	10:55	16:43	23:22
			1.3	10.8	1.1	10.4
○	Th	30	5:00	11:42	17:27	. . .
			1.0	10.8	0.9	. . .
	F	31	0:03	5:44	12:27	18:08
			10.5	0.7	10.8	0.8

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	0:43	6:27	13:08	18:47
			10.6	0.6	10.6	0.9
	S	2	1:22	7:06	13:49	19:24
			10.5	0.6	10.3	1.0
	M	3	2:00	7:50	14:29	20:02
			10.4	0.7	9.9	1.1
A	Tu	4	2:40	8:30	15:10	21:41
			10.1	0.9	9.4	1.3
	W	5	3:22	9:10	15:50	21:21
			9.8	1.1	9.0	1.6
	Th	6	4:05	9:55	16:33	22:05
			9.4	1.4	8.6	1.9
	F	7	4:50	10:40	17:20	22:52
			9.1	1.7	8.3	2.1
☾	S	8	5:40	11:30	18:12	23:43
			8.8	1.9	8.1	2.3
E	S	9	6:35	12:22	19:08	. . .
			8.7	2.0	8.1	. . .
	M	10	0:39	7:31	13:17	20:07
			2.4	8.7	2.0	8.3
	Tu	11	1:38	8:30	14:15	21:05
			2.3	8.9	1.9	8.7
	W	12	2:38	9:28	15:12	22:00
			2.0	9.2	1.6	9.1
	Th	13	3:37	10:24	16:07	22:52
			1.6	9.6	1.3	9.6
	F	14	4:33	11:17	17:01	23:42
			1.2	10.0	0.9	10.2
● N	S	15	5:27	12:09	17:53	. . .
			0.7	10.4	0.6	. . .
P	S	16	0:32	6:20	13:00	18:43
			10.6	0.3	10.6	0.4
	M	17	1:20	7:11	13:50	19:33
			10.9	0.0	10.7	0.3
	Tu	18	2:08	8:02	14:42	20:22
			11.1	—0.2	10.7	0.4
	W	19	3:00	8:55	15:35	21:13
			11.1	—0.1	10.5	0.5
	Th	20	3:50	9:46	16:28	22:05
			11.0	0.0	10.3	0.8
☽	F	21	4:44	10:42	17:25	22:58
			10.8	0.4	10.0	1.2
E	S	22	5:40	11:38	18:22	23:54
			10.6	0.8	9.7	1.5
	S	23	6:38	12:34	19:22	. . .
			10.3	1.2	9.5	. . .
	M	24	0:51	7:38	13:31	20:20
			1.8	10.1	1.5	9.4
	Tu	25	1:52	8:38	14:28	21:15
			1.9	10.0	1.7	9.5
	W	26	2:48	9:37	15:23	22:09
			2.0	10.0	1.8	9.6
	Th	27	3:48	10:32	16:18	22:56
			1.8	10.0	1.8	9.8
	F	28	4:36	11:22	17:00	23:40
			1.6	10.0	1.7	10.1
S ○	S	29	5:22	12:09	17:42	. . .
			1.4	10.0	1.5	. . .
	S	30	0:23	6:07	12:52	18:22
			10.3	1.2	10.0	1.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwhich mean civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon: for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:02 10.4	6:50 1.0	13:32 9.8	19:00 1.3
A	Tu	2	1:42 10.4	7:30 1.0	14:10 9.6	19:37 1.2
	W	3	2:20 10.3	8:08 0.9	14:47 9.4	20:15 1.2
	Th	4	2:58 10.1	8:48 0.9	15:23 9.2	20:55 1.3
	F	5	3:36 9.9	9:28 1.0	16:00 9.0	21:36 1.4
E	S	6	4:16 9.6	10:10 1.1	16:40 8.8	22:20 1.6
☾	S	7	4:58 9.3	10:53 1.3	17:25 8.6	23:07 1.8
	M	8	5:45 9.0	11:42 1.6	18:18 8.4	23:58 2.0
	Tu	9	6:41 8.7	12:35 1.8	19:17 8.3	. . . . .
	W	10	0:57 2.2	7:45 8.7	13:35 1.9	20:23 8.5
	Th	11	2:00 2.1	8:52 8.8	14:37 1.9	21:30 8.9
	F	12	3:08 1.9	9:58 9.2	15:40 1.6	22:30 8.5
N	S	13	4:12 1.4	11:00 9.7	16:40 1.3	23:25 10.2
●	S	14	5:12 0.9	11:57 10.2	17:37 0.8	. . . . .
P	M	15	0:17 10.8	6:07 0.3	12:50 10.7	18:29 0.4
	Tu	16	1:06 11.4	7:00 −0.2	13:39 11.0	19:18 0.1
	W	17	1:53 11.7	7:50 −0.5	14:28 11.1	20:07 0.0
	Th	18	2:41 11.9	8:39 −0.6	15:17 11.1	20:54 0.0
E	F	19	3:30 11.8	9:27 −0.5	16:05 10.8	21:42 0.3
	S	20	4:18 11.5	10:17 −0.1	16:55 10.4	22:30 0.7
☽	S	21	5:10 11.0	11:07 0.4	17:47 9.9	23:20 1.1
	M	22	6:05 10.4	11:59 1.1	18:42 9.5	. . . . .
	Tu	23	0:14 1.6	7:05 9.9	12:52 1.7	19:41 9.2
	W	24	1:12 2.1	8:06 9.4	13:50 2.1	20:40 9.1
	Th	25	2:14 2.3	9:10 9.2	14:47 2.4	21:38 9.2
S	F	26	3:15 2.4	10:11 9.2	15:43 2.4	22:32 9.4
	S	27	4:13 2.2	11:05 9.3	16:33 2.3	23:20 9.8
	S	28	5:04 1.9	11:53 9.5	17:18 2.0	. . . . .
○ A	M	29	0:08 10.1	5:50 1.6	12:31 9.6	18:00 1.7
	Tu	30	0:48 10.4	6:30 1.2	13:12 9.7	18:37 1.4
	W	31	1:20 10.5	7:08 0.9	13:47 9.7	19:15 1.1

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	1:57 10.6	7:45 0.7	14:20 9.7	19:50 0.9
E	F	2	2:31 10.5	8:21 0.5	14:51 9.6	20:28 0.9
	S	3	3:07 10.3	8:58 0.5	15:27 9.4	21:07 0.9
	S	4	3:42 10.0	9:37 0.7	16:03 9.2	21:48 1.1
	M	5	4:20 9.6	10:20 1.0	16:45 8.9	22:32 1.4
☾	Tu	6	5:05 9.1	11:07 1.3	17:35 8.6	23:22 1.8
	W	7	6:00 8.7	11:59 1.7	18:38 8.3	. . . . .
	Th	8	0:22 2.1	7:10 8.4	13:01 2.1	19:52 8.3
N	F	9	1:32 2.3	8:28 8.4	14:10 2.2	21:06 8.8
	S	10	2:47 2.1	9:44 8.9	15:20 2.0	22:13 9.5
	S	11	3:58 1.6	10:50 9.5	16:25 1.5	23:10 10.3
P ●	M	12	5:00 0.9	11:45 10.2	17:22 0.9	. . . . .
	Tu	13	0:01 11.2	5:55 0.2	12:35 10.9	18:13 0.3
	W	14	0:48 11.9	6:45 −0.5	13:22 11.3	19:00 −0.2
E	Th	15	1:34 12.3	7:31 −0.9	14:07 11.5	19:45 −0.4
	F	16	2:20 12.4	8:17 −1.0	14:50 11.4	20:30 −0.4
	S	17	3:05 12.2	9:02 −0.8	15:35 11.1	21:13 −0.2
	S	18	3:52 11.8	9:47 −0.3	16:20 10.6	21:59 0.3
☽	M	19	4:40 11.0	10:33 0.4	17:08 10.0	22:46 0.9
	Tu	20	5:30 10.2	11:20 1.1	18:01 9.3	23:37 1.6
	W	21	6:30 9.4	12:10 1.9	19:00 8.9	. . . . .
S	Th	22	0:35 2.3	7:35 8.9	13:08 2.5	20:07 8.7
	F	23	1:40 2.7	8:45 8.6	14:10 2.9	21:20 8.8
	S	24	2:48 2.8	9:50 8.7	15:13 2.9	22:08 9.2
A	S	25	3:51 2.6	10:46 8.9	16:07 2.6	22:57 9.6
	M	26	4:43 2.2	11:32 9.2	16:55 2.2	23:40 10.0
○	Tu	27	5:27 1.7	12:12 9.5	17:35 1.7	. . . . .
	W	28	0:19 10.4	6:06 1.3	12:46 9.8	18:13 1.3
	Th	29	0:55 10.7	6:42 1.8	13:18 9.9	18:49 0.9
E	F	30	1:29 10.8	7:17 0.4	13:48 10.0	19:24 0.6
	S	31	2:02 10.8	7:52 0.2	14:20 10.0	20:02 0.5

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	2:35 10.5	8:30 0.2	14:58 9.8	20:40 0.6
	M	2	3:10 10.2	9:08 0.4	15:30 9.5	21:20 0.8
	Tu	3	3:50 9.7	9:50 0.8	16:12 9.2	22:05 1.3
☾	W	4	4:35 9.2	10:38 1.4	17:04 8.7	22:58 1.8
	Th	5	5:32 8.6	11:30 1.9	18:12 8.3	23:59 2.2
N	F	6	6:50 8.2	12:35 2.4	19:34 8.3	. . . . .
	S	7	1:14 2.4	8:20 8.3	13:50 2.6	20:52 8.8
	S	8	2:34 2.3	9:35 8.9	15:06 2.3	21:58 9.7
P	M	9	3:45 1.7	10:38 9.6	16:10 1.6	22:54 10.6
	Tu	10	4:45 0.9	11:30 10.4	17:05 0.9	23:42 11.5
●	W	11	5:37 0.1	12:16 11.1	17:53 0.2	. . . . .
E	Th	12	0:28 12.2	6:25 −0.6	13:00 11.5	18:38 −0.4
	F	13	1:12 12.5	7:09 −0.9	13:40 11.7	19:20 −0.6
	S	14	1:54 12.5	7:51 −0.9	14:20 11.6	20:02 −0.6
	S	15	2:38 12.2	8:32 −0.7	15:02 11.2	20:45 −0.3
	M	16	3:22 11.6	9:15 −0.2	15:44 10.6	21:28 0.2
	Tu	17	4:08 10.8	9:57 0.6	16:30 9.9	22:14 0.9
☽ S	W	18	4:58 9.9	10:41 1.4	17:22 9.2	23:03 1.7
	Th	19	5:55 9.0	11:30 2.2	18:22 8.7	. . . . .
	F	20	0:00 2.4	7:04 8.4	12:26 2.8	19:30 8.5
A	S	21	1:05 2.9	8:17 8.2	13:30 3.1	20:38 8.6
	S	22	2:16 3.0	9:25 8.3	14:37 3.1	21:39 9.0
	M	23	3:20 2.8	10:19 8.6	15:35 2.8	22:28 9.5
	Tu	24	4:13 2.4	11:08 9.0	16:23 2.3	23:11 10.0
	W	25	4:55 1.8	11:40 9.5	17:05 1.7	23:49 10.4
E ○	Th	26	5:35 1.2	12:14 9.8	17:42 1.1	. . . . .
	F	27	0:24 10.7	6:10 0.7	12:45 10.1	18:20 0.6
	S	28	0:59 10.9	6:46 0.3	13:17 10.2	18:58 0.3
	S	29	1:33 10.8	7:22 0.1	13:51 10.2	19:36 0.2
	M	30	2:08 10.6	8:01 0.1	14:26 10.1	20:16 0.3

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	2:46 10.3	8:42 0.4	15:06 9.8	20:59 0.6
	W	2	3:29 9.8	9:25 0.8	15:52 9.3	21:47 1.1
N ☾	Th	3	4:20 9.1	10:15 1.5	16:47 8.8	22:41 1.6
	F	4	5:23 8.5	11:10 2.1	17:59 8.5	23:48 2.1
	S	5	6:45 8.2	12:20 2.5	19:20 8.6	. . . . .
	S	6	1:04 2.4	8:10 8.4	13:35 2.6	20:35 9.2
P	M	7	2:21 2.1	9:21 9.0	14:50 2.3	21:38 10.0
	Tu	8	3:29 1.6	10:20 9.8	15:51 1.6	22:32 10.8
E	W	9	4:25 0.8	11:09 10.5	16:44 0.8	23:20 11.6
●	Th	10	5:15 0.1	11:52 11.1	17:30 0.2	. . . . .
	F	11	0:05 12.1	6:00 −0.4	12:34 11.5	18:13 −0.3
	S	12	0:48 12.3	6:42 −0.6	13:14 11.6	18:55 −0.5
	S	13	1:30 12.2	7:23 −0.6	13:52 11.4	19:36 −0.5
	M	14	2:12 11.8	8:03 −0.3	14:32 11.1	20:18 −0.2
	Tu	15	2:55 11.2	8:42 0.2	15:13 10.5	21:00 0.3
S	W	16	3:40 10.4	9:24 0.8	15:57 9.9	21:46 0.9
	Th	17	4:28 9.5	10:06 1.5	16:47 9.3	22:34 1.6
☽	F	18	5:23 8.7	10:54 2.2	17:45 8.8	23:28 2.3
A	S	19	6:27 8.2	11:47 2.8	18:50 8.5	. . . . .
	S	20	0:28 2.8	7:38 8.0	12:49 3.1	19:57 8.6
	M	21	1:35 3.0	8:44 8.1	13:52 3.1	20:58 8.9
	Tu	22	2:37 2.8	9:38 8.4	14:52 2.8	21:50 9.3
E	W	23	3:30 2.4	10:23 8.9	15:44 2.3	22:35 9.8
	Th	24	4:16 1.8	11:02 9.3	16:29 1.7	23:15 10.2
	F	25	4:58 1.2	11:39 9.8	17:11 1.1	23:53 10.5
○	S	26	5:37 0.7	12:13 10.1	17:51 0.6	. . . . .
	S	27	0:30 10.7	6:17 0.3	12:50 10.3	18:33 0.3
	M	28	1:10 10.7	6:57 0.2	13:27 10.4	19:14 0.1
	Tu	29	1:49 10.6	7:38 0.2	14:08 10.3	20:00 0.2
N	W	30	2:31 10.3	8:22 0.5	14:52 10.0	20:45 0.5
	Th	31	3:20 9.8	9:09 0.9	15:41 9.6	21:37 0.9

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	4:14 9.2	10:00 1.5	16:00 9.2	22:34 1.4
☾	S	2	5:20 8.8	10:58 2.0	17:48 9.0	23:39 1.8
P	S	3	6:36 8.6	12:05 2.4	19:00 9.1	. . . . .
	M	4	0:50 2.0	7:51 8.8	13:16 2.4	20:10 9.6
E	Tu	5	2:00 1.8	8:58 9.3	14:25 2.1	21:13 10.2
	W	6	3:05 1.4	9:54 9.8	15:25 1.6	22:07 10.8
	Th	7	4:00 1.0	10:43 10.4	16:18 1.0	22:58 11.3
	F	8	4:50 0.5	11:27 10.8	17:05 0.5	23:43 11.6
●	S	9	5:35 0.2	12:09 11.1	17:48 0.1	. . . . .
	S	10	0:27 11.7	6:16 0.0	12:48 11.2	18:31 −0.1
	M	11	1:10 11.6	6:57 0.0	13:27 11.1	19:13 −0.1
S	Tu	12	1:52 11.2	7:35 0.2	14:07 10.9	19:55 0.1
	W	13	2:34 10.7	8:14 0.6	14:47 10.5	20:38 0.5
	Th	14	3:16 10.0	8:54 1.0	15:30 10.0	21:20 0.9
	F	15	4:01 9.3	9:35 1.5	16:17 9.5	22:07 1.5
A ☽	S	16	4:50 8.7	10:20 2.1	17:09 9.0	22:56 2.0
	S	17	5:45 8.2	11:09 2.5	18:06 8.7	23:50 2.4
	M	18	6:46 8.0	12:02 2.8	19:07 8.6	. . . . .
	Tu	19	0:47 2.6	7:48 8.0	13:03 2.8	20:07 8.7
E	W	20	1:44 2.6	8:45 8.2	14:02 2.7	21:02 9.0
	Th	21	2:40 2.3	9:35 8.6	14:58 2.3	21:52 9.3
	F	22	3:30 1.9	10:20 9.1	15:50 1.8	22:39 9.7
	S	23	4:19 1.4	11:04 9.6	16:40 1.3	23:28 10.1
○	S	24	5:05 1.0	11:45 10.0	17:26 0.8	. . . . .
	M	25	0:07 10.4	5:50 0.6	12:28 10.3	18:13 0.4
N	Tu	26	0:50 10.5	6:37 0.4	13:10 10.6	19:00 0.2
	W	27	1:36 10.5	7:21 0.4	13:55 10.6	19:48 0.1
P	Th	28	2:23 10.3	8:09 0.5	14:43 10.5	20:38 0.2
	F	29	3:15 10.1	8:57 0.8	15:34 10.3	21:30 0.5
	S	30	4:10 9.7	9:50 1.2	16:30 10.0	22:25 0.8

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	5:10 9.4	10:45 1.6	17:30 9.8	23:25 1.2
	M	2	6:16 9.2	11:45 1.9	18:35 9.8	. . . . .
E	Tu	3	0:28 1.4	7:23 9.2	12:49 2.1	19:40 9.9
	W	4	1:32 1.6	8:26 9.4	13:53 2.0	20:42 10.1
	Th	5	2:33 1.5	9:23 9.7	14:54 1.8	21:40 10.4
	F	6	3:30 1.4	10:15 10.0	15:50 1.4	22:34 10.7
	S	7	4:21 1.1	11:02 10.4	16:40 1.1	23:22 10.8
●	S	8	5:09 1.0	11:45 10.6	17:26 0.7	. . . . .
S	M	9	0:10 10.9	5:52 0.8	12:27 10.8	18:12 0.5
	Tu	10	0:54 10.8	6:32 0.7	13:08 10.8	18:55 0.4
	W	11	1:35 10.6	7:11 0.8	13:47 10.7	19:37 0.5
	Th	12	2:16 10.2	7:50 0.9	14:27 10.5	20:17 0.6
	F	13	2:56 9.8	8:29 1.1	15:07 10.2	21:00 0.9
A	S	14	3:36 9.4	9:08 1.4	15:49 9.8	21:40 1.2
	S	15	4:18 8.9	9:50 1.7	16:32 9.4	22:24 1.5
☽	M	16	5:02 8.5	10:33 2.0	17:20 9.1	23:10 1.8
E	Tu	17	5:49 8.2	11:21 2.3	18:10 8.8	23:58 2.0
	W	18	6:43 8.1	12:13 2.4	19:06 8.6	. . . . .
	Th	19	0:51 2.2	7:40 8.1	13:10 2.5	20:05 8.6
	F	20	1:48 2.2	8:41 8.3	14:10 2.3	21:06 8.8
	S	21	2:45 2.0	9:40 8.3	15:11 2.0	22:03 9.2
	S	22	3:42 1.7	10:31 9.3	16:10 1.6	22:57 9.6
	M	23	4:38 1.3	11:22 9.8	17:05 1.1	23:48 10.0
N ○	Tu	24	5:30 0.9	12:11 10.4	17:57 0.6	. . . . .
	W	25	0:38 10.4	6:20 0.6	12:59 10.8	18:50 0.1
P	Th	26	1:27 10.6	7:10 0.4	13:46 11.1	19:40 −0.1
	F	27	2:16 10.7	7:58 0.3	14:32 11.2	20:29 −0.2
	S	28	3:06 10.6	8:46 0.4	15:22 11.1	21:20 −0.1
	S	29	3:57 10.4	9:35 0.6	16:14 11.0	22:11 0.1
E ☾	M	30	4:50 10.1	10:26 0.9	17:08 10.7	23:05 0.5
	T	31	5:47 9.8	11:20 1.3	18:04 10.3	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.6 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Greenwich Mean Civil; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:18 1.6	7:35 9.2	13:45 1.4	20:06 9.4
	Tu	2	2:15 1.2	8:37 9.6	14:46 1.0	21:07 9.9
	W	3	3:14 0.8	9:35 10.1	15:42 0.6	22:02 10.3
N ○ P	Th	4	4:10 0.4	10:29 10.5	16:36 0.2	22:55 10.7
	F	5	5:01 0.1	11:20 10.8	17:26 −0.1	23:44 10.9
	S	6	5:50 −0.1	12:09 10.9	18:15 −0.1	. . . . .
	S	7	0:34 10.9	6:39 −0.1	12:56 10.9	19:04 0.0
	M	8	1:21 10.8	7:27 0.1	13:45 10.6	19:52 0.2
	Tu	9	2:10 10.5	8:16 0.4	14:35 10.3	20:42 0.6
E	W	10	3:00 10.1	9:08 0.8	15:27 9.9	21:34 1.0
☾	Th	11	3:54 9.7	10:02 1.2	16:22 9.5	22:30 1.5
	F	12	4:51 9.2	10:59 1.7	17:22 9.1	23:29 1.8
	S	13	5:52 8.9	12:01 2.0	18:25 8.8	. . . . .
	S	14	0:32 2.1	6:57 8.8	13:04 2.1	19:29 8.8
	M	15	1:35 2.1	8:00 8.8	14:04 2.1	20:29 8.9
	Tu	16	2:33 2.0	8:56 9.0	15:00 1.9	21:22 9.1
S	W	17	3:25 1.7	9:57 9.2	15:48 1.7	22:09 9.3
A	Th	18	4:10 1.6	10:30 9.4	16:31 1.5	22:49 9.4
●	F	19	4:50 1.4	11:07 9.5	17:06 1.4	23:25 9.5
	S	20	5:26 1.3	11:41 9.5	17:41 1.3	23:57 9.5
	S	21	5:57 1.2	12:13 9.6	18:12 1.2	. . . . .
	M	22	0:28 9.6	6:28 1.1	12:42 9.6	18:45 1.1
	Tu	23	0:58 9.6	7:01 1.1	13:15 9.6	19:19 1.1
E	W	24	1:31 9.6	7:37 1.1	13:49 9.6	19:56 1.1
	Th	25	2:07 9.5	8:16 1.2	14:28 9.5	20:38 1.2
	F	26	2:50 9.4	9:01 1.3	15:14 9.3	21:26 1.5
☽	S	27	3:40 9.1	9:52 1.6	16:08 9.0	22:22 1.8
	S	28	4:38 8.8	10:54 1.9	17:13 8.7	23:27 2.0
	M	29	5:50 8.6	12:04 2.1	18:28 8.7	. . . . .
	Tu	30	0:41 2.0	7:06 8.7	13:19 1.9	19:43 8.9
N	W	31	1:55 1.7	8:20 9.2	14:28 1.5	20:52 9.5

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:00 1.2	9:23 9.8	15:30 0.9	21:52 10.1
P ○	F	2	3:58 0.6	10:19 10.4	16:26 0.3	22:45 10.7
	S	3	4:51 0.1	11:10 10.9	17:15 −0.1	23:33 11.1
	S	4	5:39 −0.3	11:56 11.2	18:01 −0.4	. . . . .
	M	5	0:18 11.2	6:24 −0.4	12:40 11.2	18:46 −0.4
E	Tu	6	1:02 11.2	7:07 −0.3	13:24 11.0	19:29 −0.2
	W	7	1:45 10.9	7:50 0.0	14:07 10.7	20:12 0.2
	Th	8	2:29 10.4	8:35 0.5	14:52 10.1	20:58 0.8
	F	9	3:16 9.8	9:22 1.1	15:41 9.5	21:47 1.4
☾	S	10	4:06 9.2	10:13 1.7	16:35 8.9	22:42 2.0
	S	11	5:04 8.6	11:11 2.3	17:37 8.4	23:45 2.5
	M	12	6:12 8.3	12:18 2.6	18:46 8.2	. . . . .
S	Tu	13	0:53 2.7	7:21 8.2	13:27 2.6	19:54 8.3
A	W	14	2:00 2.5	8:26 8.5	14:30 2.4	20:55 8.6
	Th	15	2:58 2.2	9:20 8.8	15:22 2.0	21:45 9.1
	F	16	3:46 1.8	10:06 9.2	16:07 1.6	22:27 9.4
	S	17	4:26 1.4	10:45 9.6	16:45 1.2	23:01 9.7
●	S	18	5:02 1.1	11:18 9.8	17:18 1.0	23:44 9.9
	M	19	5:34 0.8	11:50 10.0	17:50 0.7	. . . . .
	Tu	20	0:04 10.1	6:05 0.6	12:20 10.1	18:21 0.6
E	W	21	0:35 10.1	6:37 0.6	12:50 10.1	18:56 0.6
	Th	22	1:07 10.1	7:12 0.6	13:24 10.1	19:30 0.6
	F	23	1:42 10.0	7:50 0.7	14:02 9.8	20:10 0.9
	S	24	2:23 9.7	8:32 1.1	14:46 9.5	20:56 1.3
☽	S	25	3:10 9.3	9:23 1.5	15:37 9.0	21:52 1.8
	M	26	4:10 8.8	10:25 2.1	16:44 8.5	23:00 2.2
N	Tu	27	5:24 8.4	11:40 2.3	18:06 8.3	. . . . .
	W	28	0:20 2.4	6:49 8.5	13:02 2.3	19:21 8.6
	Th	29	1:41 2.1	8:08 8.9	14:16 1.7	20:42 9.3

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	2:50 1.4	9:13 9.7	15:20 1.0	21:41 10.1
	S	2	3:47 0.6	10:07 10.4	16:12 0.3	22:32 10.8
○	S	3	4:37 0.0	10:56 11.0	17:00 −0.2	23:18 11.2
E	M	4	5:22 −0.4	11:39 11.3	17:42 −0.5	23:59 11.4
	Tu	5	6:03 −0.5	12:19 11.3	18:23 −0.5	. . . . .
	W	6	0:38 11.2	6:43 −0.4	12:58 11.1	19:02 −0.2
	Th	7	1:18 10.9	7:22 0.0	13:37 10.7	19:42 0.2
	F	8	1:57 10.4	8:01 0.5	14:18 10.1	20:22 0.8
	S	9	2:39 9.8	8:44 1.1	15:00 9.4	21:06 1.5
☾	S	10	3:24 9.1	9:30 1.8	15:50 8.7	21:56 2.2
S	M	11	4:18 8.4	10:25 2.5	16:49 8.2	22:58 2.7
	Tu	12	5:24 8.0	11:31 2.9	18:00 7.9	. . . . .
A	W	13	0:09 3.0	6:38 7.9	12:45 2.9	19:15 8.0
	Th	14	1:21 2.8	7:48 8.2	13:53 2.6	20:19 8.4
	F	15	2:22 2.4	8:46 8.7	14:48 2.1	21:10 9.0
	S	16	3:13 1.9	9:33 9.2	15:34 1.6	21:53 9.5
	S	17	3:54 1.3	10:12 9.7	16:14 1.1	22:31 9.9
●	M	18	4:31 0.8	10:48 10.1	16:48 0.7	23:05 10.2
E	Tu	19	5:06 0.5	11:20 10.4	17:22 0.4	23:36 10.4
	W	20	5:39 0.3	11:53 10.5	17:55 0.2	. . . . .
	Th	21	0:12 10.5	6:13 0.2	12:27 10.5	18:30 0.2
	F	22	0:43 10.4	6:49 0.3	13:02 10.3	19:09 0.4
	S	23	1:21 10.2	7:28 0.6	13:41 10.0	19:50 0.8
	S	24	2:03 9.8	8:13 1.0	14:26 9.5	20:37 1.3
	M	25	2:51 9.2	9:05 1.6	15:21 8.9	21:35 1.9
N ☽	Tu	26	3:54 8.6	10:10 2.1	16:31 8.4	22:47 2.3
	W	27	5:12 8.3	11:28 2.4	17:57 8.3	. . . . .
P	Th	28	0:10 2.4	6:39 8.4	12:50 2.3	19:19 8.7
	F	29	1:29 2.0	7:55 9.0	14:08 1.7	20:28 9.4
	S	30	2:35 1.3	8:58 9.8	15:08 1.0	21:24 10.2
	S	31	3:30 0.6	9:50 10.5	15:54 0.3	22:13 10.8

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Dublin Mean Civil, for the meridian 6° 20′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	4:17	10:35	16:39	22:57
			0.1	11.0	—0.1	11.1
	Tu	2	5:00	11:17	17:20	23:36
			—0.3	11.2	—0.3	11.2
	W	3	5:39	11:55	17:58	. . .
			—0.3	11.1	—0.2	. . .
	Th	4	0:14	6:16	12:32	18:35
			11.0	—0.1	10.8	0.1
	F	5	0:51	6:53	13:09	19:11
			10.6	0.3	10.4	0.5
	S	6	1:27	7:31	13:46	19:50
			10.1	0.8	9.8	1.0
	S	7	2:05	8:10	14:26	20:30
			9.5	1.4	9.2	1.7
S	M	8	2:47	8:53	15:11	21:18
			8.9	2.0	8.6	2.2
☾	Tu	9	3:36	9:44	16:06	22:14
			8.3	2.5	8.1	2.7
A	W	10	4:38	10:47	17:13	23:22
			7.9	2.9	7.8	2.9
	Th	11	5:50	11:58	18:26	. . .
			7.8	2.9	7.9	. . .
	F	12	0:32	7:00	13:05	19:30
			2.8	8.1	2.6	8.3
	S	13	1:35	7:58	14:02	20:25
			2.4	8.6	2.1	8.9
	S	14	2:38	8:48	14:52	21:10
			1.8	9.2	1.5	9.5
E	M	15	3:14	9:32	15:35	21:51
			1.2	9.7	1.0	10.0
	Tu	16	3:55	10:11	16:15	22:30
			0.7	10.2	0.5	10.4
●	W	17	4:38	10:48	16:52	23:07
			0.3	10.5	0.2	10.6
	Th	18	5:11	11:21	17:30	23:44
			0.1	10.6	0.0	10.7
	F	19	5:50	12:08	18:10	. . .
			0.0	10.6	0.1	. . .
	S	20	0:28	6:30	12:44	18:50
			10.5	0.2	10.4	0.4
	S	21	1:05	7:12	13:27	19:35
			10.2	0.6	10.0	0.8
N P	M	22	1:51	8:00	14:17	20:26
			9.8	1.0	9.5	1.3
	Tu	23	2:44	8:56	15:16	21:27
			9.2	1.6	9.0	1.8
☽	W	24	3:50	10:02	16:27	22:42
			8.7	2.0	8.6	2.2
	Th	25	5:07	11:20	17:47	23:58
			8.5	2.2	8.6	2.2
	F	26	6:25	12:35	19:01	. . .
			8.7	2.0	9.0	. . .
	S	27	1:11	7:35	13:44	20:05
			1.8	9.2	1.5	9.5
E	S	28	2:13	8:33	14:40	21:00
			1.2	9.8	1.0	10.1
	M	29	3:06	9:25	15:30	21:48
			0.7	10.3	0.5	10.5
	Tu	30	3:58	10:10	16:15	22:31
			0.3	10.7	0.2	10.8

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	4:35	10:52	16:55	23:12
			0.1	10.8	0.1	10.7
	Th	2	5:15	11:30	17:33	23:50
			0.2	10.6	0.3	10.5
	F	3	5:52	12:08	18:10	. . .
			0.4	10.3	0.6	. . .
	S	4	0:26	6:28	12:43	18:46
			10.1	0.8	9.9	0.9
S	S	5	1:02	7:04	13:20	19:22
			9.7	1.1	9.5	1.4
	M	6	1:38	7:40	13:58	20:02
			9.2	1.6	9.0	1.8
A	Tu	7	2:18	8:22	14:40	20:45
			8.8	2.0	8.6	2.2
	W	8	3:05	9:10	15:30	21:37
			8.4	2.4	8.2	2.5
☾	Th	9	3:57	10:06	16:28	22:37
			8.1	2.6	8.0	2.7
	F	10	5:00	11:10	17:32	23:41
			8.0	2.7	8.1	2.6
	S	11	6:05	12:12	18:35	. . .
			8.2	2.5	8.4	. . .
	S	12	0:43	7:05	13:11	19:33
			2.3	8.6	2.0	8.9
E	M	13	1:40	8:00	14:05	20:23
			1.8	9.1	1.5	9.4
	Tu	14	2:30	8:48	14:54	21:11
			1.3	9.7	1.0	9.9
	W	15	3:17	9:34	15:40	21:56
			0.8	10.1	0.5	10.3
●	Th	16	4:02	10:18	16:24	22:40
			0.4	10.4	0.2	10.5
	F	17	4:45	11:03	17:07	23:24
			0.1	10.6	0.1	10.6
	S	18	5:30	11:45	17:58	. . .
			0.1	10.6	0.2	. . .
N P	S	19	0:08	6:15	12:31	18:38
			10.5	0.3	10.4	0.4
	M	20	0:54	7:02	13:19	19:27
			10.2	0.5	10.1	0.7
	Tu	21	1:45	7:53	14:12	20:20
			9.9	0.9	9.7	1.1
	W	22	2:40	8:50	15:12	21:20
			9.5	1.3	9.3	1.5
☽	Th	23	3:44	9:54	16:18	22:28
			9.2	1.6	9.1	1.7
	F	24	4:52	11:02	17:27	23:37
			9.0	1.8	9.0	1.8
E	S	25	6:00	12:10	18:34	. . .
			9.1	1.7	9.2	. . .
	S	26	0:44	7:05	13:15	19:35
			1.6	9.4	1.5	9.5
	M	27	1:44	8:05	14:12	20:30
			1.8	9.7	1.2	9.8
	Tu	28	2:38	8:58	15:18	21:21
			1.0	10.0	0.9	10.1
	W	29	3:27	9:45	15:50	22:08
			0.8	10.2	0.7	10.2
○	Th	30	4:12	10:29	16:33	22:50
			0.7	10.2	0.7	10.2
	F	31	4:52	11:10	17:12	23:29
			0.8	10.1	0.9	10.0

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	5:31	11:48	17:49	. . .
			1.0	9.8	1.1	. . .
	S	2	0:07	6:07	12:23	18:25
			9.7	1.2	9.5	1.3
	M	3	0:41	6:43	12:59	19:00
			9.4	1.5	9.2	1.6
A	Tu	4	1:17	7:18	13:35	19:38
			9.1	1.7	8.9	1.8
	W	5	1:54	7:57	14:13	20:18
			8.8	1.9	8.7	2.0
	Th	6	2:35	8:40	14:57	21:03
			8.6	2.1	8.6	2.1
	F	7	3:22	9:28	15:47	21:55
			8.5	2.2	8.5	2.2
☾	S	8	4:18	10:22	16:41	22:51
			8.5	2.2	8.5	2.2
E	S	9	5:10	11:20	17:40	23:50
			8.5	2.1	8.6	2.0
	M	10	6:10	12:20	18:40	. . .
			8.8	1.9	8.9	. . .
	Tu	11	0:50	7:10	13:18	19:38
			1.7	9.1	1.6	9.3
	W	12	1:46	8:06	14:15	20:33
			1.4	9.5	1.2	9.7
	Th	13	2:41	9:00	15:08	21:27
			1.0	9.9	0.8	10.0
	F	14	3:33	9:52	16:00	22:18
			0.6	10.2	0.5	10.4
● N	S	15	4:25	10:42	16:50	23:07
			0.3	10.5	0.2	10.5
P	S	16	5:15	11:32	17:39	23:57
			0.2	10.5	0.2	10.6
	M	17	6:03	12:20	18:28	. . .
			0.2	10.5	0.2	. . .
	Tu	18	0:46	6:58	13:12	19:18
			10.4	0.3	10.4	0.4
	W	19	1:37	7:45	14:03	20:10
			10.3	0.5	10.1	0.7
	Th	20	2:30	8:38	14:58	21:07
			10.0	0.8	9.9	1.0
☽	F	21	3:28	9:35	15:58	22:05
			9.7	1.1	9.6	1.3
E	S	22	4:27	10:36	16:53	23:07
			9.5	1.4	9.4	1.5
	S	23	5:29	11:38	18:00	. . .
			9.3	1.6	9.3	. . .
	M	24	0:10	6:31	12:40	19:02
			1.6	9.3	1.6	9.3
	Tu	25	1:10	7:32	13:40	20:00
			1.6	9.3	1.6	9.4
	W	26	2:08	8:30	14:36	20:56
			1.5	9.5	1.5	9.5
	Th	27	3:00	9:21	15:26	21:46
			1.4	9.6	1.4	9.6
	F	28	3:50	10:10	16:13	22:31
			1.3	9.7	1.3	9.7
S ○	S	29	4:35	10:53	16:55	23:12
			1.3	9.6	1.3	9.6
	S	30	5:14	11:32	17:32	23:50
			1.3	9.5	1.4	9.5

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Dublin Mean Civil, for the meridian 6° 20′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	JULY.						
	M	1	5:50	12:10	18:07	. . .	
			1.4	9.4	1.5	. . .	
A	Tu	2	0:24	6:24	12:40	18:41	
			9.3	1.5	9.2	1.5	
	W	3	0:56	6:57	13:12	19:15	
			9.2	1.6	9.1	1.6	
	Th	4	1:30	7:32	13:47	19:50	
			9.1	1.6	9.1	1.6	
	F	5	2:05	8:10	14:25	20:30	
			9.0	1.6	9.0	1.7	
E	S	6	2:45	8:52	15:09	21:15	
			9.0	1.7	9.0	1.7	
☾	S	7	3:30	9:40	15:55	22:05	
			8.9	1.8	8.9	1.8	
	M	8	4:21	10:33	16:50	23:02	
			8.9	1.8	8.8	1.9	
	Tu	9	5:20	11:32	17:52	. . .	
			8.8	1.8	8.8	. . .	
	W	10	0:03	6:25	12:35	18:58	
			1.8	8.9	1.8	9.0	
	Th	11	1:10	7:30	13:42	20:02	
			1.7	9.1	1.5	9.3	
	F	12	2:13	8:33	14:43	21:08	
			1.3	9.5	1.2	9.7	
N	S	13	3:13	9:32	15:42	22:00	
			0.9	10.0	0.7	10.2	
● P	S	14	4:09	10:28	16:36	22:54	
			0.5	10.4	0.3	10.5	
	M	15	5:00	11:20	17:27	23:45	
			0.2	10.7	0.1	10.8	
	Tu	16	5:51	12:10	18:15	. . .	
			0.0	10.8	—0.1	. . .	
	W	17	0:33	6:40	12:58	19:05	
			10.9	—0.1	10.8	0.0	
	Th	18	1:22	7:28	13:47	19:52	
			10.8	0.0	10.7	0.2	
E	F	19	2:10	8:17	14:37	20:42	
			10.5	0.3	10.4	0.5	
	S	20	3:01	9:07	15:27	21:35	
			10.2	0.7	10.0	0.9	
☽	S	21	3:55	10:02	16:23	22:30	
			9.8	1.1	9.5	1.3	
	M	22	4:52	11:00	17:22	23:31	
			9.3	1.6	9.1	1.8	
	Tu	23	5:54	12:03	18:26	. . .	
			9.0	1.9	8.9	. . .	
	W	24	0:35	6:58	13:07	19:30	
			2.0	8.9	2.1	8.9	
	Th	25	1:38	8:02	14:09	20:32	
			2.0	8.9	2.0	9.0	
S	F	26	2:37	9:00	15:05	21:27	
			1.9	9.1	1.8	9.2	
	S	27	3:30	9:50	15:54	22:13	
			1.7	9.3	1.6	9.4	
	S	28	4:16	10:35	16:37	22:55	
			1.5	9.5	1.4	9.5	
○ A	M	29	4:56	11:13	17:18	23:30	
			1.4	9.5	1.3	9.6	
	Tu	30	5:30	11:47	17:47	. . .	
			1.3	9.6	1.3	. . .	
	W	31	0:03	6:02	12:18	18:18	
			9.6	1.2	9.5	1.2	
	AUGUST.						
	Th	1	0:38	6:34	12:47	18:49	
			9.5	1.2	9.5	1.2	
E	F	2	1:02	7:05	13:18	19:21	
			9.5	1.1	9.5	1.1	
	S	3	1:34	7:39	13:50	19:58	
			9.5	1.2	9.5	1.2	
	S	4	2:10	8:18	14:30	20:39	
			9.4	1.2	9.4	1.3	
	M	5	2:50	9:01	15:14	21:27	
			9.3	1.4	9.2	1.5	
☾	Tu	6	3:40	9:52	16:08	22:22	
			9.1	1.7	8.9	1.8	
	W	7	4:38	10:54	17:12	23:29	
			8.8	1.9	8.6	2.0	
	Th	8	5:50	12:04	18:27	. . .	
			8.6	2.1	8.6	. . .	
N	F	9	0:40	7:05	13:18	19:42	
			2.0	8.8	1.9	9.0	
	S	10	1:58	8:18	14:26	20:50	
			1.7	9.2	1.4	9.5	
	S	11	2:58	9:20	15:28	21:49	
			1.2	9.8	0.8	10.1	
P ●	M	12	3:56	10:17	16:22	22:42	
			0.5	10.4	0.3	10.7	
	Tu	13	4:48	11:07	17:12	23:30	
			0.0	10.9	—0.2	11.1	
	W	14	5:36	11:53	17:59	. . .	
			—0.3	11.2	—0.4	. . .	
E	Th	15	0:15	6:21	12:38	18:43	
			11.3	—0.5	11.2	—0.4	
	F	16	1:00	7:06	13:22	19:28	
			11.2	—0.3	11.1	—0.2	
	S	17	1:44	7:50	14:06	20:12	
			10.9	0.0	10.6	0.2	
	S	18	2:30	8:36	14:54	21:00	
			10.4	0.5	10.1	0.8	
☽	M	19	3:19	9:26	15:45	21:52	
			9.8	1.1	9.5	1.5	
	Tu	20	4:13	10:20	16:43	22:51	
			9.2	1.8	8.9	2.0	
	W	21	5:15	10:23	17:50	23:57	
			8.6	2.3	8.5	2.4	
S	Th	22	6:25	12:32	19:00	. . .	
			8.4	2.5	8.4	. . .	
	F	23	1:07	7:35	13:41	20:06	
			2.5	8.5	2.4	8.6	
	S	24	2:12	8:36	14:40	21:03	
			2.3	8.7	2.1	8.9	
A	S	25	3:06	9:28	15:30	21:50	
			2.0	9.1	1.8	9.3	
	M	26	3:52	10:12	16:12	22:30	
			1.6	9.5	1.4	9.6	
○	Tu	27	4:31	10:48	16:48	23:05	
			1.3	9.7	1.1	9.8	
	W	28	5:04	11:20	17:20	23:35	
			1.0	9.9	0.9	9.9	
	Th	29	5:25	11:50	17:50	. . .	
			0.8	10.0	0.8	. . .	
E	F	30	0:04	6:05	12:19	18:20	
			10.0	0.7	10.0	0.7	
	S	31	0:33	6:36	13:48	18:52	
			10.0	0.7	10.0	0.7	
	SEPTEMBER.						
	S	1	1:04	7:10	13:21	19:28	
			9.9	0.8	9.9	0.8	
	M	2	1:39	7:47	13:58	20:08	
			9.8	1.0	9.6	1.1	
	Tu	3	2:19	8:30	14:42	20:54	
			9.5	1.3	9.3	1.5	
☾	W	4	3:08	9:28	15:37	21:53	
			9.1	1.7	8.8	1.9	
	Th	5	4:10	10:26	16:47	23:03	
			8.6	2.1	8.4	2.3	
N	F	6	5:27	11:43	18:10	. . .	
			8.3	2.4	8.4	. . .	
	S	7	0:24	6:52	13:03	19:31	
			2.3	8.5	2.2	8.8	
	S	8	1:40	8:07	14:15	20:38	
			1.9	9.1	1.6	9.5	
P	M	9	2:46	9:09	15:16	21:36	
			1.2	9.9	0.8	10.3	
	Tu	10	3:42	10:01	16:07	22:26	
			0.4	10.6	0.1	10.9	
●	W	11	4:31	10:49	16:54	23:11	
			—0.2	11.1	—0.4	11.3	
E	Th	12	5:16	11:33	17:37	23:53	
			—0.5	11.4	—0.6	11.4	
	F	13	5:58	12:14	18:18	. . .	
			—0.6	11.4	—0.5	. . .	
	S	14	0:35	6:40	12:55	19:00	
			11.2	—0.4	11.1	—0.2	
	S	15	1:16	7:20	13:36	19:41	
			10.9	0.0	10.6	0.3	
	M	16	1:57	8:03	14:20	20:25	
			10.3	0.6	10.0	1.0	
	Tu	17	2:43	8:49	15:08	21:14	
			9.6	1.3	9.3	1.6	
☽ S	W	18	3:34	9:41	16:04	22:11	
			8.9	2.0	8.6	2.3	
	Th	19	4:36	10:44	17:10	23:19	
			8.3	2.5	8.1	2.7	
	F	20	5:47	11:55	18:25	. . .	
			8.0	2.7	8.1	. . .	
A	S	21	0:32	7:01	13:07	19:34	
			2.8	8.1	2.7	8.3	
	S	22	1:40	8:05	14:09	20:32	
			2.5	8.5	2.3	8.8	
	M	23	2:35	8:56	14:58	21:19	
			2.1	9.0	1.8	9.3	
	Tu	24	3:20	9:39	15:40	21:58	
			1.6	9.5	1.3	9.7	
	W	25	3:58	10:15	16:16	22:32	
			1.1	9.9	0.9	10.0	
E ○	Th	26	4:32	10:48	16:48	23:03	
			0.7	10.1	0.6	10.2	
	F	27	5:04	11:19	17:20	23:34	
			0.5	10.3	0.4	10.3	
	S	28	5:36	11:49	17:52	. . .	
			0.4	10.3	0.4	. . .	
	S	29	0:05	6:09	12:21	18:26	
			10.3	0.4	10.3	0.4	
	M	30	0:38	7:44	12:56	19:03	
			10.2	0.5	10.1	0.7	

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Dublin Mean Civil, for the meridian 6° 20′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:15	7:23	13:35	19:45
			9.9	0.9	9.7	1.0
	W	2	1:58	8:08	14:21	20:34
			9.5	1.3	9.3	1.6
N ☾	Th	3	2:48	9:03	15:20	21:35
			9.0	1.8	8.7	2.1
	F	4	3:54	10:10	16:34	22:49
			8.5	2.3	8.3	2.4
	S	5	5:16	11:30	18:01	. . .
			8.2	2.5	8.3	. . .
	S	6	0:13	6:41	12:52	19:20
			2.4	8.5	2.2	8.8
P	M	7	1:28	7:53	14:01	20:25
			1.9	9.2	1.5	9.6
	Tu	8	2:31	8:53	14:59	21:20
			1.1	10.0	0.7	10.4
E	W	9	3:24	9:48	15:47	22:07
			0.4	10.7	0.1	10.9
●	Th	10	4:11	10:28	16:23	22:49
			—0.1	11.1	—0.3	11.2
	F	11	4:58	11:10	17:14	23:30
			—0.4	11.3	—0.4	11.3
	S	12	5:34	11:50	17:53	. . .
			—0.4	11.2	—0.3	. . .
	S	13	0:10	6:13	12:29	18:32
			11.0	—0.2	10.8	0.0
	M	14	0:49	6:53	13:09	19:12
			10.6	0.3	10.3	0.6
	Tu	15	1:29	7:32	13:50	19:54
			10.0	0.9	9.7	1.2
S	W	16	2:11	8:16	14:34	20:40
			9.4	1.5	9.1	1.8
	Th	17	2:59	9:05	15:26	21:32
			8.8	2.1	8.5	2.4
☽	F	18	3:56	10:04	16:29	22:36
			8.2	2.6	8.0	2.8
A	S	19	5:04	11:12	17:40	23:46
			7.9	2.9	7.9	2.9
	S	20	6:16	12:21	18:50	. . .
			8.0	2.8	8.1	. . .
	M	21	0:54	7:19	13:23	19:46
			2.6	8.3	2.4	8.6
	Tu	22	1:50	8:12	14:14	20:36
			2.2	8.9	1.9	9.2
E	W	23	2:37	8:56	14:58	21:16
			1.6	9.4	1.3	9.7
	Th	24	3:18	9:36	15:37	21:54
			1.1	9.9	0.9	10.1
	F	25	3:56	10:13	16:15	22:30
			0.7	10.2	0.5	10.3
○	S	26	4:32	10:48	16:50	23:05
			0.4	10.4	0.3	10.5
	S	27	5:09	11:23	17:27	23:42
			0.2	10.5	0.2	10.5
	M	28	5:45	12:01	18:05	. . .
			0.2	10.4	0.3	. . .
	Tu	29	0:19	6:25	12:40	18:46
			10.3	0.4	10.2	0.6
N	W	30	1:00	7:08	13:22	19:32
			10.0	0.8	9.8	1.0
	Th	31	1:46	7:56	14:12	20:25
			9.5	1.2	9.3	1.5

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	2:41	8:54	15:13	21:26
			9.0	1.8	8.8	2.0
☾	S	2	3:48	10:02	16:27	22:40
			8.6	2.2	8.5	2.2
P	S	3	5:07	11:19	17:47	23:58
			8.5	2.2	8.6	2.1
	M	4	6:25	12:34	19:00	. . .
			8.8	2.0	9.0	. . .
E	Tu	5	1:09	7:33	13:40	20:03
			1.7	9.3	1.4	9.6
	W	6	2:10	8:30	14:36	20:56
			1.1	10.0	0.8	10.2
	Th	7	3:01	9:20	15:26	21:45
			0.6	10.5	0.3	10.7
	F	8	3:49	10:07	16:11	22:39
			0.2	10.8	0.1	10.9
●	S	9	4:32	10:50	16:52	23:10
			0.0	10.9	0.0	10.8
	S	10	5:12	11:29	17:32	23:49
			0.1	10.7	0.2	10.6
	M	11	5:51	12:06	18:10	. . .
			0.3	10.4	0.5	. . .
S	Tu	12	0:27	6:30	12:47	18:49
			10.2	0.7	10.0	0.9
	W	13	1:06	7:08	13:25	19:28
			9.7	1.1	9.5	1.4
	Th	14	1:45	7:48	14:07	20:10
			9.2	1.6	9.0	1.8
	F	15	2:29	8:34	14:52	20:58
			8.7	2.1	8.5	2.3
A ☽	S	16	3:18	9:25	15:46	21:53
			8.3	2.4	8.2	2.6
	S	17	4:16	10:23	16:47	22:54
			8.1	2.6	8.1	2.7
	M	18	5:19	11:25	17:50	23:56
			8.1	2.7	8.2	2.6
	Tu	19	6:20	12:26	18:50	. . .
			8.3	2.4	8.5	. . .
E	W	20	0:54	7:17	13:21	19:43
			2.2	8.7	2.0	8.9
	Th	21	1:47	8:06	14:11	20:31
			1.8	9.2	1.5	9.4
	F	22	2:35	8:54	14:57	21:16
			1.3	9.7	1.0	9.9
	S	23	3:20	9:39	15:42	22:00
			0.8	10.1	0.6	10.2
○	S	24	4:03	10:20	16:24	22:42
			0.5	10.3	0.3	10.4
	M	25	4:45	11:02	17:08	23:22
			0.3	10.5	0.2	10.5
N	Tu	26	5:29	11:45	17:51	. . .
			0.2	10.4	0.3	. . .
	W	27	0:07	6:13	12:29	18:36
			10.4	0.4	10.3	0.5
P	Th	28	0:52	7:00	13:16	19:24
			10.1	0.6	10.0	0.8
	F	29	1:41	7:50	14:08	20:18
			9.8	1.0	9.6	1.2
	S	30	2:36	8:47	15:07	21:18
			9.4	1.4	9.3	1.5

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	3:40	9:50	16:13	22:24
			9.1	1.7	9.0	1.8
	M	2	4:48	10:59	17:23	23:33
			9.0	1.8	9.0	1.8
E	Tu	3	5:57	12:06	18:31	. . .
			9.0	1.8	9.2	. . .
	W	4	0:40	7:08	13:11	19:34
			1.7	9.3	1.5	9.5
	Th	5	1:40	8:04	14:10	20:31
			1.4	9.7	1.2	9.8
	F	6	2:39	8:58	15:03	21:22
			1.0	10.0	0.9	10.1
	S	7	3:27	9:48	15:50	22:10
			0.8	10.2	0.7	10.3
●	S	8	4:13	10:32	16:35	22:54
			0.6	10.3	0.6	10.2
S	M	9	4:56	11:14	17:16	23:33
			0.6	10.2	0.7	10.1
	Tu	10	5:35	11:52	17:54	. . .
			0.8	10.0	0.9	. . .
	W	11	0:11	6:14	12:30	18:32
			9.9	0.9	9.7	1.2
	Th	12	0:49	6:50	13:06	19:09
			9.6	1.3	9.4	1.4
	F	13	1:25	7:26	13:43	19:45
			9.2	1.6	9.1	1.7
A	S	14	2:02	8:05	14:22	20:25
			8.9	1.8	8.8	1.9
	S	15	2:42	8:48	15:05	21:10
			8.7	2.0	8.6	2.1
☽	M	16	3:28	9:36	15:53	22:01
			8.5	2.2	8.5	2.2
E	Tu	17	4:19	10:29	16:48	22:57
			8.4	2.3	8.4	2.3
	W	18	5:16	11:25	17:45	23:56
			8.4	2.2	8.5	2.2
	Th	19	6:16	12:24	18:47	. . .
			8.6	2.1	8.7	. . .
	F	20	0:54	7:16	13:23	19:45
			1.9	8.9	1.8	9.1
	S	21	1:52	8:13	14:20	20:40
			1.6	9.3	1.4	9.5
	S	22	2:46	9:07	15:13	21:34
			1.2	9.7	1.0	9.9
	M	23	3:38	9:58	16:04	22:23
			0.8	10.1	0.6	10.3
N ○	Tu	24	4:28	10:47	16:52	23:11
			0.4	10.4	0.3	10.5
	W	25	5:16	11:34	17:40	23:58
			0.2	10.6	0.2	10.6
P	Th	26	6:04	12:21	18:28	. . .
			0.2	10.6	0.2	. . .
	F	27	0:45	6:52	13:10	19:17
			10.5	0.2	10.4	0.3
	S	28	1:34	7:42	14:00	20:07
			10.3	0.4	10.2	0.6
	S	29	2:26	8:34	14:52	21:01
			10.1	0.7	9.9	0.9
E ☾	M	30	3:20	9:29	15:50	21:58
			9.8	1.1	9.6	1.3
	Tu	31	4:20	10:29	16:52	23:00
			9.4	1.4	9.3	1.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 5.4 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Dublin Mean Civil, for the meridian 6° 20′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:27 10.0	7:42 2.0	14:02 10.2	20:12 2.0
	Tu	2	2:32 10.5	8:48 1.6	15:02 10.7	21:18 1.5
N	W	3	3:30 11.1	9:50 1.2	15:58 11.1	22:16 1.0
☿	Th	4	4:21 11.7	10:46 0.8	16:48 11.5	23:10 0.6
	F	5	5:11 12.0	11:40 0.4	17:37 11.8	. . . . .
	S	6	0:02 0.2	6:00 12.3	12:30 0.3	18:25 11.9
	S	7	0:50 0.1	6:48 12.3	13:17 0.3	19:11 11.8
	M	8	1:38 0.2	7:37 12.1	14:05 0.5	20:00 11.6
	Tu	9	2:28 0.4	8:27 11.8	14:54 0.8	20:50 11.2
E	W	10	3:16 0.8	9:18 11.2	15:48 1.2	21:44 10.7
☾	Th	11	4:08 1.2	10:13 10.7	16:35 1.3	22:38 10.2
	F	12	5:01 1.7	11:12 10.1	17:32 2.2	23:40 9.7
	S	13	6:00 2.2	12:14 9.7	18:34 2.6	. . . . .
	S	14	0:45 9.5	7:06 2.4	13:20 9.5	19:40 2.7
	M	15	1:48 9.5	8:10 2.5	14:21 9.5	20:40 2.5
	Tu	16	2:45 9.8	9:10 2.3	15:14 9.7	21:37 2.2
S	W	17	3:34 10.1	10:04 2.1	16:00 9.9	22:24 1.9
A	Th	18	4:17 10.3	10:49 1.8	16:40 10.2	23:05 1.7
●	F	19	4:56 10.6	11:27 1.7	17:13 10.3	23:40 1.5
	S	20	5:30 10.9	12:00 1.6	17:46 10.5	. . . . .
	S	21	0:12 1.4	6:04 11.1	12:29 1.6	18:18 10.7
	M	22	0:40 1.3	6:36 11.3	12:55 1.5	18:50 10.9
	Tu	23	1:09 1.3	7:10 11.4	13:25 1.4	19:21 11.0
E	W	24	1:40 1.2	7:46 11.3	13:56 1.4	19:59 11.0
	Th	25	2:18 1.2	8:25 11.1	14:32 1.5	20:40 10.8
	F	26	2:54 1.4	9:08 10.8	15:14 1.7	21:26 10.4
☽	S	27	3:40 1.7	9:58 10.2	16:04 2.1	22:23 9.9
	S	28	4:36 2.2	10:59 9.7	17:06 2.5	23:30 9.4
	M	29	5:47 2.6	12:13 9.3	18:24 2.8	. . . . .
	Tu	30	0:52 9.4	7:11 2.7	13:36 9.3	19:51 2.7
N	W	31	2:13 9.8	8:36 2.4	14:52 9.9	21:10 2.0

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:22 10.6	9:48 1.6	15:55 10.7	22:13 1.1
P ○	F	2	4:17 11.5	10:45 0.8	16:43 11.4	23:07 0.3
	S	3	5:07 12.2	11:35 0.1	17:30 12.0	23:55 —0.3
	S	4	5:57 12.7	12:20 —0.3	18:13 12.4	. . . . .
	M	5	0:38 —0.6	6:35 12.9	13:02 —0.4	18:55 12.5
E	Tu	6	1:20 —0.6	7:16 12.8	13:42 —0.2	19:36 12.3
	W	7	2:01 —0.3	7:58 12.4	14:22 0.2	20:17 11.8
	Th	8	2:42 0.3	8:42 11.7	15:03 0.9	21:00 11.1
	F	9	3:25 1.1	9:27 10.8	15:47 1.7	21:48 10.3
☾	S	10	4:12 1.9	10:17 9.9	16:37 2.5	22:41 9.5
	S	11	5:07 2.7	11:17 9.1	17:35 3.1	23:47 8.9
	M	12	6:15 3.2	12:30 8.6	18:50 3.5	. . . . .
S	Tu	13	1:04 8.6	7:36 3.4	13:50 8.5	20:10 3.3
A	W	14	2:20 8.9	8:49 3.1	14:58 8.9	21:13 2.8
	Th	15	3:15 9.5	9:47 2.6	15:43 9.5	22:05 2.2
	F	16	4:00 10.1	10:32 2.0	16:22 10.0	22:45 1.6
	S	17	4:40 10.7	11:10 1.5	16:57 10.6	23:20 1.1
●	S	18	5:12 11.2	11:40 1.2	17:28 11.0	23:50 0.8
	M	19	5:44 11.7	12:06 1.0	17:57 11.4	. . . . .
	Tu	20	0:18 0.6	6:15 12.0	12:32 0.8	18:27 11.7
E	W	21	0:45 0.5	6:46 12.1	12:49 0.7	18:59 11.8
	Th	22	1:13 0.5	7:18 12.0	13:28 0.7	19:32 11.7
	F	23	1:45 0.6	7:53 11.7	14:01 0.9	20:09 11.4
	S	24	2:22 1.0	8:32 11.1	14:40 1.4	20:53 10.8
☽	S	25	3:07 1.6	9:20 10.3	15:28 2.0	21:46 10.0
	M	26	4:01 2.4	10:20 9.4	16:30 2.8	22:56 9.1
N	Tu	27	5:18 3.1	11:45 8.6	18:00 3.3	. . . . .
	W	28	0:34 8.8	7:02 3.3	13:25 8.7	19:47 3.0
	Th	29	2:07 9.5	8:37 2.6	14:47 9.7	21:07 2.0

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	3:16 10.5	9:45 1.5	15:45 10.8	22:05 0.8
	S	2	4:09 11.6	10:35 0.5	16:33 11.7	22:55 —0.2
○	S	3	4:54 12.5	11:21 —0.3	17:15 12.5	23:38 —0.8
E	M	4	5:35 13.1	12:00 —0.8	17:55 12.8	. . . . .
	Tu	5	0:17 —1.1	6:13 13.3	12:38 —0.8	18:32 12.9
	W	6	0:56 —0.9	6:50 13.1	13:15 —0.4	19:07 12.6
	Th	7	1:30 —0.4	7:27 12.5	13:49 0.2	19:43 12.1
	F	8	2:07 0.3	8:04 11.7	14:24 1.0	20:20 11.3
	S	9	2:44 1.2	8:42 10.8	15:00 1.8	21:02 10.3
☾	S	10	3:25 2.1	9:26 9.7	15:44 2.7	21:50 9.4
S	M	11	4:13 3.0	10:20 8.7	16:40 3.5	22:53 8.6
	Tu	12	5:25 3.7	11:37 8.1	18:00 3.9	. . . . .
A	W	13	0:19 8.2	6:56 3.9	13:10 8.0	19:32 3.7
	Th	14	1:45 8.5	8:20 3.5	14:25 8.6	20:42 3.0
	F	15	2:47 9.3	9:18 2.8	15:15 9.4	21:32 2.2
	S	16	3:33 10.2	10:00 2.0	15:54 10.2	22:13 1.4
	S	17	4:11 11.0	10:37 1.3	16:28 10.0	22:48 0.8
●	M	18	4:45 11.6	11:06 0.8	16:59 11.5	23:17 0.4
E	Tu	19	5:16 12.1	11:36 0.5	17:30 12.0	23:47 0.1
	W	20	5:47 12.4	12:02 0.3	18:00 12.3	. . . . .
	Th	21	0:15 0.1	6:19 12.5	12:30 0.3	18:32 12.3
	F	22	0:47 0.2	6:52 12.3	13:01 0.5	19:07 12.0
	S	23	1:20 0.5	7:27 11.8	13:36 0.9	19:45 11.5
	S	24	2:00 1.1	8:07 11.0	14:16 1.5	20:30 10.7
N	M	25	2:45 1.9	8:55 10.1	15:07 2.3	21:28 9.7
☽	Tu	26	4:47 2.7	10:01 9.0	16:30 3.2	22:47 8.9
	W	27	5:17 3.5	11:37 8.4	18:05 3.5	. . . . .
P	Th	28	0:32 8.8	7:06 3.3	13:22 8.8	19:45 2.8
	F	29	2:00 9.7	8:30 2.4	14:37 9.9	20:55 1.6
	S	30	3:02 10.8	9:28 1.2	15:30 11.0	21:47 0.5
	S	31	3:50 11.9	10:16 0.2	16:13 12.0	22:32 —0.4

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Dublin Mean Civil for the meridian 6° 20′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	4:33 12.6	10:58 −0.5	16:52 12.6	23:18 −0.9
	Tu	2	5:12 13.0	11:35 −0.7	17:29 12.8	23:52 −0.9
	W	3	5:47 13.0	12:10 −0.5	18:04 12.8	. . . . .
	Th	4	0:27 −0.6	6:22 12.7	12:44 −0.1	18:37 12.4
	F	5	1:00 0.0	6:55 12.1	13:16 0.6	19.11 11.8
	S	6	1:34 0.8	7:30 11.3	13:49 1.3	19:46 11.0
	S	7	2:08 1.6	8:05 10.4	14:23 2.1	20:25 10.2
S	M	8	2:47 2.4	8:45 9.5	15:03 2.9	21:11 9.4
☾	Tu	9	3:34 3.2	9:35 8.6	15:55 3.6	22:12 8.6
A	W	10	4:38 3.8	10:50 8.0	17:14 4.0	23:35 8.3
	Th	11	6:06 4.0	12:24 7.9	18:43 3.7	. . . . .
	F	12	1:00 8.8	7:30 8.6	13:40 8.6	19:54 8.0
	S	13	2:05 9.3	8:30 2.8	14:32 9.5	20:46 2.2
	S	14	2:54 10.3	9:15 2.0	15:14 10.4	21:29 1.4
E	M	15	3:33 11.1	9:52 1.3	15:50 11.2	22:06 0.7
	Tu	16	4:10 11.8	10:25 0.7	16:25 11.8	22:42 0.3
●	W	17	4:44 12.2	10:59 0.4	16:59 12.2	23:15 0.1
	Th	18	5:18 12.5	11:32 0.2	17:33 12.4	23:48 0.1
	F	19	5:53 12.4	12:05 0.3	18:10 12.3	. . . . .
	S	20	0:05 0.3	6:30 12.0	12:40 0.6	18:48 11.9
	S	21	1:05 0.8	7:08 11.5	13:20 1.2	19:32 11.3
N P	M	22	1:48 1.4	7:58 10.7	14:06 1.8	20:22 10.5
	Tu	23	2:43 2.2	8:48 9.7	15:10 2.6	21:27 9.6
☽	W	24	3:55 3.0	10:02 8.9	16:32 3.1	22:50 9.1
	Th	25	5:26 3.2	11:39 8.7	18:05 2.9	. . . . .
	F	26	0:28 9.3	6:55 2.8	13:07 9.3	19:25 2.2
	S	27	1:40 10.1	8:05 1.9	14:12 10.2	20:27 1.3
E	S	28	2:37 11.0	9:00 1.1	15:04 11.2	21:20 0.5
	M	29	3:25 11.8	9:47 0.3	15:45 11.8	22:05 −0.1
	Tu	30	4:07 12.3	10:29 −0.1	16:27 12.2	22:47 −0.4
MAY.						
○	W	1	4:45 12.5	11:07 −0.1	17:02 12.3	23:25 −0.3
	Th	2	5:20 12.4	11:43 0.1	17:37 12.2	. . . . .
	F	3	0:00 0.1	5:55 12.0	12:17 0.6	18:10 11.8
	S	4	0:35 0.7	6:28 11.4	12:50 1.2	18:45 11.3
S	S	5	1:08 1.4	7:01 10.8	13:21 1.8	19:20 10.7
	M	6	1:42 2.0	7:36 10.1	13:56 2.4	20:00 10.1
A	Tu	7	2:21 2.7	8:16 9.4	14:37 2.9	20:45 9.5
	W	8	3:07 3.2	9:05 8.8	15:28 3.3	21:42 9.0
☾	Th	9	4:06 3.5	10:10 8.4	16:34 3.5	22:52 8.8
	F	10	5:17 3.6	11:28 8.4	17:46 3.3	. . . . .
	S	11	0:06 8.9	6:27 8.3	12:40 8.8	18:54 2.8
	S	12	1:10 9.5	7:26 2.7	13:40 9.5	19:48 2.2
E	M	13	2:05 10.2	8:17 2.1	14:27 10.3	20:37 1.5
	Tu	14	2:51 10.9	9:02 1.4	15:10 11.1	21:23 0.9
	W	15	3:32 11.5	9:45 0.9	15:51 11.7	22:05 0.5
●	Th	16	4:12 11.9	10:25 0.6	16:31 12.0	22:46 0.4
	F	17	4:52 12.0	11:05 0.5	17:11 12.2	23:30 0.4
	S	18	5:33 12.0	11:48 0.6	17:54 12.0	. . . . .
N P	S	19	0:12 0.6	6:15 11.7	12:32 0.9	18:38 11.7
	M	20	1:00 1.1	7:00 11.2	13:21 1.3	19:27 11.2
	Tu	21	1:52 1.6	7:51 10.5	14:17 1.8	20:24 10.6
	W	22	2:52 2.1	8:52 9.9	15:22 2.2	21:30 10.1
☽	Th	23	4:02 2.4	10:08 9.5	16:33 2.3	22:42 9.8
	F	24	5:15 2.5	11:22 9.4	17:45 2.2	23:58 10.0
E	S	25	6:26 2.2	12:37 9.8	18:52 1.8	. . . . .
	S	26	0:06 10.3	7:30 1.8	13:38 10.4	19:53 1.3
	M	27	2:05 10.9	8:25 1.3	14:30 10.9	20:47 0.9
	Tu	28	2:55 11.3	9:15 0.9	15:16 11.3	21:35 0.6
	W	29	3:40 11.5	10:00 0.7	15:58 11.5	22:20 0.5
○	Th	30	4:20 11.5	10:42 0.7	16:39 11.5	23:02 0.7
	F	31	4:58 11.4	11:22 0.9	17:15 11.4	23:41 1.0
JUNE.						
S	S	1	5:34 11.1	11:58 1.3	17:50 11.1	. . . . .
	S	2	0:18 1.4	6:08 10.7	12:32 1.7	18:25 10.8
	M	3	0:52 1.9	6:42 10.3	13:06 2.1	19:01 10.5
A	Tu	4	1:26 2.3	7:16 9.9	13:41 2.4	19:40 10.2
	W	5	2:04 2.6	7:56 9.6	14:20 2.6	20:25 9.9
	Th	6	2:45 2.8	8:40 9.4	15:06 2.8	21:14 9.6
	F	7	3:33 2.9	9:34 9.2	15:57 2.8	22:10 9.5
☽	S	8	4:25 2.9	10:33 9.1	16:52 2.7	23:10 9.5
E	S	9	5:22 2.8	11:36 9.2	17:50 2.5	. . . . .
	M	10	0:10 9.7	6:20 2.5	12:37 9.6	18:48 2.2
	Tu	11	1:09 10.0	7:17 2.2	13:37 10.1	19:45 1.8
	W	12	2:07 10.5	8:13 1.8	14:30 10.7	20:40 1.4
	Th	13	2:57 10.9	9:07 1.4	15:20 11.2	21:35 1.1
	F	14	3:46 11.3	9:58 1.1	16:09 11.6	22:27 0.9
● N	S	15	4:33 11.5	10:50 0.9	16:57 11.8	23:18 0.8
P	S	16	5:21 11.6	11:40 0.8	17:45 11.9	. . . . .
	M	17	0:09 0.8	6:06 11.5	12:32 0.8	18:33 11.8
	Tu	18	1:00 1.0	6:58 11.3	13:24 0.9	19:25 11.6
	W	19	1:54 1.2	7:50 11.0	14:18 1.1	20:20 11.2
	Th	20	2:50 1.4	8:46 10.6	15:14 1.3	21:18 10.9
☽	F	21	3:46 1.6	9:48 10.3	16:14 1.4	22:20 10.6
E	S	22	4:46 1.8	10:49 10.2	17:14 1.6	23:22 10.4
	S	23	5:46 1.9	11:54 10.0	18:12 1.7	. . . . .
	M	24	0:26 10.3	6:47 1.9	12:58 10.1	19:15 1.7
	Tu	25	1:28 10.3	7:47 1.9	13:56 10.3	20:14 1.6
	W	26	2:24 10.4	8:44 1.7	14:48 10.5	21:10 1.5
	Th	27	3:14 10.5	9:36 1.6	15:35 10.7	22:01 1.4
	F	28	4:00 10.6	10:24 1.5	16:18 10.8	22:48 1.4
S ○	S	29	4:42 10.5	11:06 1.5	17:00 10.8	23:30 1.5
	S	30	5:20 10.5	11:46 1.6	17:36 10.8	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Dublin Mean Civil for the meridan 6° 20′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	0:09 1.7	5:54 10.4	12:20 1.7	18:12 10.7
A	Tu	2	0:40 1.9	6:27 10.3	12:54 1.9	18:46 10.7
	W	3	1:11 2.1	7:00 10.2	13:25 2.0	19:24 10.6
	Th	4	1:43 2.2	7:35 10.2	13:58 2.0	20:00 10.6
	F	5	2:16 2.2	8:14 10.2	14:34 2.0	20:41 10.4
E	S	6	2:54 2.2	8:57 10.1	15:14 2.0	21:27 10.3
☾	S	7	3:36 2.2	9:45 10.0	16:00 2.1	22:16 10.0
	M	8	4:24 2.3	10:40 9.8	16:54 2.1	23:14 9.9
	Tu	9	5:21 2.3	11:41 9.7	17:53 2.2	. . . . .
	W	10	0:16 9.7	6:24 2.4	12:48 9.8	19:00 2.2
	Th	11	1:22 9.8	7:32 2.3	13:56 10.1	20:10 2.0
	F	12	2:30 10.2	8:40 2.0	15:00 10.6	21:17 1.7
N	S	13	3:30 10.7	9:46 1.5	15:56 11.2	22:18 1.2
● P	S	14	4:24 11.1	10:44 1.0	16:48 11.7	23:15 0.8
	M	15	5:14 11.5	11:38 0.5	17:38 12.1	. . . . .
	Tu	16	0:07 0.5	6:02 11.8	12:28 0.2	18:27 12.3
	W	17	0:55 0.3	6:50 11.9	13:16 0.1	19:16 12.3
	Th	18	1:43 0.3	7:37 11.8	14:04 0.2	20:08 12.1
E	F	19	2:30 0.5	8:25 11.5	14:51 0.4	20:54 11.6
	S	20	3:18 0.9	9:16 11.1	15:41 0.9	21:44 11.0
☽	S	21	4:07 1.4	10:10 10.5	16:32 1.4	22:40 10.4
	M	22	5:02 1.9	11:08 10.0	17:30 2.0	23:42 9.9
	Tu	23	6:02 2.4	12:12 9.6	18:35 2.3	. . . . .
	W	24	0:48 9.6	7:08 2.6	13:20 9.5	19:42 2.5
	Th	25	1:56 9.5	8:16 2.6	14:22 9.7	20:48 2.4
S	F	26	2:54 9.6	9:15 2.3	15:18 10.0	21:47 2.1
	S	27	3:46 9.9	10:08 1.9	16:05 10.3	22:36 1.8
	S	28	4:28 10.1	10:52 1.6	16:46 10.6	23:17 1.7
○ A	M	29	5:07 10.3	11:31 1.4	17:22 10.9	23:52 1.6
	Tu	30	5:40 10.5	12:04 1.3	17:55 11.0	. . . . .
	W	31	0:23 1.5	6:08 10.7	12:33 1.3	18:26 11.2

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	0:48 1.5	6:40 10.9	12:59 1.3	18:58 11.3
E	F	2	1:14 1.5	7:09 11.0	13:28 1.3	19:30 11.3
	S	3	1:42 1.4	7:42 11.0	13:57 1.3	20:06 11.2
	S	4	2:13 1.5	8:20 10.9	14:33 1.4	20:44 10.9
	M	5	2:50 1.6	9:02 10.6	15:15 1.6	21:29 10.4
☾	Tu	6	3:36 1.9	9:52 10.1	16:06 2.0	22:24 9.8
	W	7	4:31 2.3	10:53 9.6	17:09 2.5	23:32 9.3
	Th	8	5:40 2.8	12:11 9.3	18:28 2.8	. . . . .
N	F	9	0:53 9.1	7:08 2.8	13:34 9.5	19:56 2.7
	S	10	2:16 9.5	8:32 2.4	14:50 10.3	21:14 2.0
	S	11	3:28 10.3	9:42 1.5	15:50 11.1	22:14 1.2
P ●	M	12	4:17 11.2	10:39 0.6	16:42 12.0	23:08 0.4
	Tu	13	5:06 11.9	11:28 −0.1	17:28 12.6	23:55 −0.2
	W	14	5:50 12.4	12:14 −0.6	18:12 13.0	. . . . .
E	Th	15	0:39 −0.4	6:32 12.6	12:57 −0.7	18:54 13.0
	F	16	1:20 −0.4	7:14 12.5	13:38 −0.5	19:36 12.6
	S	17	2:00 0.0	7:56 12.1	14:20 0.0	20:20 12.0
	S	18	2:42 0.6	8:40 11.5	15:04 0.8	21:05 11.2
☽	M	19	3:26 1.4	9:26 10.6	15:52 1.6	21:55 10.2
	Tu	20	4:16 2.2	10:20 9.8	16:47 2.4	22:54 9.3
	W	21	5:18 2.9	11:27 9.1	17:55 3.0	. . . . .
S	Th	22	0:08 8.7	7:32 3.3	12:44 8.8	19:17 3.2
	F	23	1:30 8.7	7:50 3.2	14:00 9.1	20:31 3.0
	S	24	2:38 9.0	8:58 2.7	15:00 9.6	21:31 2.5
A	S	25	3:29 9.6	9:50 2.0	15:47 10.2	22:18 1.9
	M	26	4:10 10.1	10:32 1.4	16:26 10.8	22:56 1.4
○	Tu	27	4:45 10.6	11:08 1.0	17:00 11.3	23:27 1.1
	W	28	5:14 11.0	11:38 0.8	17:31 11.6	23:53 1.0
	Th	29	5:42 11.3	12:04 0.7	18:00 11.9	. . . . .
E	F	30	0:16 0.9	6:10 11.6	12:28 0.6	18:28 12.0
	S	31	0:42 0.9	6:39 11.7	12:54 0.7	18:58 11.9

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	1:06 0.9	7:11 11.7	13:24 0.7	19:31 11.6
	M	2	1:36 1.0	7:46 11.4	13:57 1.0	20:08 11.1
	Tu	3	2:12 1.4	8:26 10.9	14:38 1.5	20:50 10.4
☾	W	4	2:57 1.9	9:16 10.1	15:28 2.2	21:46 9.5
	Th	5	3:55 2.7	10:22 9.3	16:38 3.0	23:01 8.8
N	F	6	5:18 3.3	11:52 8.8	18:16 3.4	. . . . .
	S	7	0:42 8.6	7:04 3.2	13:29 9.2	19:58 2.9
	S	8	2:12 9.3	8:31 2.3	14:44 10.3	21:10 1.9
P	M	9	3:16 10.5	9:36 1.1	15:40 11.4	22:07 0.8
	Tu	10	4:05 11.5	10:26 0.0	16:28 12.4	22:54 −0.1
●	W	11	4:50 12.4	11:12 −0.7	17:10 13.0	23:34 −0.7
E	Th	12	5:30 12.9	11:51 −1.1	17:50 13.4	. . . . .
	F	13	0:13 −0.8	6:08 13.0	12:30 −1.0	18:28 13.2
	S	14	0:50 −0.6	6:45 12.8	13:08 −0.6	19:06 12.7
	S	15	1:28 0.0	7:24 12.3	13:47 0.1	19:45 11.9
	M	16	2:05 0.8	8:02 11.5	14:26 1.0	20:26 11.0
	Tu	17	2:46 1.7	8:45 10.5	15:11 2.0	21:11 9.9
☽ S	W	18	3:32 2.6	9:36 9.6	16:04 2.9	22:08 8.9
	Th	19	4:34 3.3	10:42 8.7	17:18 3.6	23:28 8.2
	F	20	5:56 3.7	12:09 8.4	18:47 3.7	. . . . .
A	S	21	1:01 8.2	7:21 3.5	13:33 8.7	20:07 8.3
	S	22	2:12 8.8	8:30 2.8	14:34 9.5	21:05 2.6
	M	23	3:02 9.5	9:20 2.0	15:20 10.3	21:46 1.9
	Tu	24	3:42 10.3	10:00 1.3	15:56 11.0	22:21 1.3
	W	25	4:14 10.9	10:32 0.8	16:30 11.6	22:50 0.9
E ○	Th	26	4:42 11.5	11:02 0.4	16:59 12.0	23:16 0.6
	F	27	5:12 11.8	11:30 0.3	17:30 12.3	23:42 0.5
	S	28	5:40 12.1	11:55 0.3	17:58 12.3	. . . . .
	S	29	0:08 0.5	6:11 12.1	12:24 0.4	18:29 12.1
	M	30	0:35 0.6	6:44 12.0	12:54 0.6	19:02 11.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Dublin Mean Civil for the meridian 6° 20′ W.: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon: for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
APRIL.						
E ○	M	1	4:33 12.6	10:58 −0.5	16:52 12.6	23:13 −0.9
	Tu	2	5:12 13.0	11:35 −0.7	17:29 12.8	23:52 −0.9
	W	3	5:47 13.0	12:10 −0.5	18:04 12.8	. . . . .
	Th	4	0:27 −0.6	6:22 12.7	12:44 −0.1	18:37 12.4
	F	5	1:00 0.0	6:55 12.1	13:16 0.6	19.11 11.8
	S	6	1:34 0.8	7:30 11.8	13:49 1.3	19:46 11.0
	S	7	2:08 1.6	8:05 10.4	14:23 2.1	20:25 10.2
S	M	8	2:47 2.4	8:45 9.5	15:03 2.9	21:11 9.4
☾	Tu	9	3:34 3.2	9:35 8.6	15:55 3.6	22:12 8.6
A	W	10	4:38 3.8	10:50 8.0	17:14 4.0	23:35 8.3
	Th	11	6:08 4.0	12:24 7.9	18:43 3.7	. . . . .
	F	12	1:00 8.8	7:30 3.6	13:40 8.6	19:54 3.0
	S	13	2:05 9.3	8:30 2.8	14:32 9.5	20:46 2.2
	S	14	2:54 10.3	9:15 2.0	15:14 10.4	21:29 1.4
E	M	15	3:33 11.1	9:52 1.3	15:50 11.2	22:06 0.7
	Tu	16	4:10 11.8	10:25 0.7	16:25 11.8	22:42 0.3
●	W	17	4:44 12.2	10:59 0.4	16:59 12.2	23:15 0.1
	Th	18	5:18 12.5	11:32 0.2	17:33 12.4	23:48 0.1
	F	19	5:53 12.4	12:05 0.3	18:10 12.3	. . . . .
	S	20	0:05 0.3	6:30 12.0	12:40 0.6	18:48 11.9
	S	21	1:05 0.8	7:08 11.5	13:20 1.2	19:32 11.3
N P	M	22	1:48 1.4	7:58 10.7	14:06 1.8	20:22 10.5
	Tu	23	2:43 2.2	8:48 9.7	15:10 2.6	21:27 9.6
☽	W	24	3:55 3.0	10:02 8.9	16:32 3.1	22:50 9.1
	Th	25	5:26 3.2	11:39 8.7	18:05 2.9	. . . . .
	F	26	0:23 9.3	6:55 2.8	13:07 9.3	19:25 2.2
	S	27	1:40 10.1	8:05 1.9	14:12 10.2	20:27 1.3
E	S	28	2:37 11.0	9:00 1.1	15:04 11.2	21:20 0.5
	M	29	3:25 11.8	9:47 0.3	15:45 11.8	22:05 −0.1
	Tu	30	4:07 12.3	10:29 −0.1	16:27 12.2	22:47 −0.4
MAY.						
○	W	1	4:45 12.5	11:07 −0.1	17:02 12.3	23:25 −0.3
	Th	2	5:20 12.4	11:43 0.1	17:37 12.2	. . . . .
	F	3	0:00 0.1	5:55 12.0	12:17 0.6	18:10 11.8
	S	4	0:35 0.7	6:28 11.4	12:50 1.2	18:45 11.3
S	S	5	1:08 1.4	7:01 10.8	13:21 1.8	19:20 10.7
	M	6	1:42 2.0	7:36 10.1	13:56 2.4	20:00 10.1
A	Tu	7	2:21 2.7	8:16 9.4	14:37 2.9	20:45 9.5
	W	8	3:07 3.2	9:05 8.8	15:28 3.3	21:42 9.0
☾	Th	9	4:06 3.5	10:10 8.4	16:34 3.5	22:52 8.8
	F	10	5:17 3.6	11:28 8.4	17:46 3.3	. . . . .
	S	11	0:05 8.9	6:27 3.3	12:40 8.8	18:54 2.8
	S	12	1:10 9.5	7:26 2.7	13:40 9.5	19:48 2.2
E	M	13	2:05 10.2	8:17 2.1	14:27 10.3	20:37 1.5
	Tu	14	2:51 10.9	9:02 1.4	15:10 11.1	21:23 0.9
	W	15	3:32 11.5	9:45 0.9	15:51 11.7	22:05 0.5
●	Th	16	4:12 11.9	10:25 0.6	16:31 12.0	22:46 0.4
	F	17	4:52 12.0	11:05 0.5	17:11 12.2	23:30 0.4
	S	18	5:33 12.0	11:48 0.6	17:54 12.0	. . . . .
N P	S	19	0:12 0.6	6:15 11.7	12:32 0.9	18:38 11.7
	M	20	1:00 1.1	7:00 11.2	13:21 1.3	19:27 11.2
	Tu	21	1:52 1.6	7:51 10.5	14:17 1.8	20:24 10.6
	W	22	2:52 2.1	8:52 9.9	15:22 2.2	21:30 10.1
☽	Th	23	4:02 2.4	10:08 9.5	16:33 2.3	22.42 9.8
	F	24	5:15 2.5	11:22 9.4	17:45 2.2	23:58 10.0
E	S	25	6:26 2.2	12:37 9.8	18:52 1.8	. . . . .
	S	26	0:06 10.3	7:30 1.8	13:38 10.4	19:53 1.3
	M	27	2:05 10.9	8:25 1.3	14:30 10.9	20:47 0.9
	Tu	28	2:55 11.3	9:15 0.9	15:16 11.3	21:35 0.6
	W	29	3:40 11.5	10:00 0.7	15:58 11.5	22:20 0.5
○	Th	30	4:20 11.5	10:42 0.7	16:39 11.5	23:02 0.7
	F	31	4:58 11.4	11:22 0.9	17:15 11.4	23:41 1.0
JUNE.						
S	S	1	5:34 11.1	11:58 1.3	17:50 11.1	. . . . .
	S	2	0:18 1.4	6:08 10.7	12:32 1.7	18:25 10.8
	M	3	0:52 1.9	6:42 10.3	13:06 2.1	19:01 10.5
A	Tu	4	1:26 2.3	7:16 9.9	13:41 2.4	19:40 10.2
	W	5	2:04 2.6	7:56 9.6	14:20 2.6	20:25 9.9
	Th	6	2:45 2.8	8:40 9.4	15:06 2.8	21:14 9.6
	F	7	3:33 2.9	9:34 9.2	15:57 2.8	22:10 9.5
☽	S	8	4:25 2.9	10:33 9.1	16:52 2.7	23:10 9.5
E	S	9	5:22 2.8	11:36 9.2	17:50 2.5	. . . . .
	M	10	0:10 9.7	6:20 2.5	12:37 9.6	18:48 2.2
	Tu	11	1:09 10.0	7:17 2.2	13:37 10.1	19:45 1.8
	W	12	2:07 10.5	8:13 1.8	14:30 10.7	20:40 1.4
	Th	13	2:57 10.9	9:07 1.4	15:20 11.2	21:35 1.1
	F	14	3:46 11.3	9:58 1.1	16:09 11.6	22:27 0.9
● N	S	15	4:33 11.5	10:50 0.9	16:57 11.8	23:18 0.8
P	S	16	5:21 11.6	11:40 0.8	17:45 11.9	. . . . .
	M	17	0:09 0.8	6:08 11.5	12:32 0.8	18:33 11.8
	Tu	18	1:00 1.0	6:58 11.3	13:24 0.9	19:25 11.6
	W	19	1:54 1.2	7:50 11.0	14:18 1.1	20:20 11.2
	Th	20	2:50 1.4	8:46 10.6	15:14 1.3	21:18 10.9
☽	F	21	3:46 1.6	9:48 10.3	16:14 1.4	22:20 10.6
E	S	22	4:46 1.8	10:49 10.2	17:14 1.6	23:22 10.4
	S	23	5:46 1.9	11:54 10.0	18:12 1.7	. . . . .
	M	24	0:26 10.3	6:47 1.9	12:58 10.1	19:15 1.7
	Tu	25	1:28 10.3	7:47 1.9	13:56 10.3	20:14 1.6
	W	26	2:24 10.4	8:44 1.7	14:48 10.5	21:10 1.5
	Th	27	3:14 10.5	9:36 1.6	15:35 10.7	22:01 1.4
	F	28	4:00 10.6	10:24 1.5	16:18 10.8	22:48 1.4
S ○	S	29	4:42 10.5	11:06 1.5	17:00 10.8	23:30 1.5
	S	30	5:20 10.5	11:46 1.6	17:36 10.8	. . . . .

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Dublin Mean Civil for the meridian 6° 20′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.					Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.				
	M	1	0:09	5:54	12:20	18:12			Th	1	0:48	6:40	12:59	18:58			S	1	1:06	7:11	13:24	19:31	
			1.7	10.4	1.7	10.7					1.5	10.9	1.8	11.3					0.9	11.7	0.7	11.6	
A	Tu	2	0:40	6:27	12:54	18:46		E	F	2	1:14	7:09	13:28	19:30			M	2	1:36	7:46	13:57	20:08	
			1.9	10.3	1.9	10.7					1.5	11.0	1.3	11.3					1.0	11.4	1.0	11.1	
	W	3	1:11	7:00	13:25	19:24			S	3	1:42	7:42	13:57	20:06			Tu	3	2:12	8:26	14:38	20:50	
			2.1	10.2	2.0	10.6					1.4	11.0	1.3	11.2					1.4	10.9	1.5	10.4	
	Th	4	1:43	7:35	13:58	20:00			S	4	2:13	8:20	14:33	20:44		☾	W	4	2:57	9:16	15:28	21:46	
			2.2	10.2	2.0	10.6					1.5	10.9	1.4	10.9					1.9	10.1	2.2	9.5	
	F	5	2:16	8:14	14:34	20:41			M	5	2:50	9:02	15:15	21:29			Th	5	3:55	10:22	16:38	23:01	
			2.2	10.2	2.0	10.4					1.6	10.6	1.6	10.4					2.7	9.3	3.0	8.8	
E	S	6	2:54	8:57	15:14	21:27		☾	Tu	6	3:36	9:52	16:06	22:24		N	F	6	5:18	11:52	18:16	. . .	
			2.2	10.1	2.0	10.3					1.9	10.1	2.0	9.8					3.3	8.8	3.4	. . .	
☾	S	7	3:36	9:45	16:00	22:16			W	7	4:31	10:58	17:09	23:32			S	7	0:42	7:04	13:29	19:58	
			2.2	10.0	2.1	10.0					2.3	9.6	2.5	9.3					3.6	8.2	9.2	2.9	
	M	8	4:24	10:40	16:54	23:14			Th	8	5:40	12:11	18:28	. . .			S	8	2:12	8:31	14:44	21:10	
			2.3	9.8	2.1	9.9					2.8	9.3	2.8	. . .					9.3	2.3	10.3	1.9	
	Tu	9	5:21	11:41	17:53	. . .		N	F	9	0:53	7:08	13:34	19:56		P	M	9	3:16	9:36	15:40	22:07	
			2.3	9.7	2.2	. . .					9.1	2.8	9.5	2.7					10.5	1.1	11.4	0.8	
	W	10	0:16	6:24	12:48	19:00			S	10	2:16	8:32	14:50	21:14			Tu	10	4:05	10:26	16:28	22:54	
			9.7	2.4	9.8	2.2					9.5	2.4	10.3	2.0					11.5	0.0	12.4	—0.1	
	Th	11	1:22	7:32	13:56	20:10			S	11	3:23	9:42	15:50	22:14		●	W	11	4:50	11:12	17:10	23:34	
			9.8	2.3	10.1	2.0					10.3	1.5	11.1	1.2					12.4	—0.7	13.0	—0.7	
	F	12	2:30	8:40	15:00	21:17		P	M	12	4:17	10:39	16:42	23:06		E	Th	12	5:30	11:51	17:50	. . .	
			10.2	2.0	10.6	1.7		●			11.2	0.6	12.0	0.4					12.9	—1.1	13.4	. . .	
N	S	13	3:30	9:46	15:56	22:18			Tu	13	5:06	11:28	17:28	23:55			F	13	0:13	6:08	12:30	18:28	
			10.7	1.5	11.2	1.2					11.9	—0.1	12.6	—0.2					—0.8	13.0	—1.0	13.2	
●	S	14	4:24	10:44	16:48	23:15			W	14	5:50	12:14	18:12	. . .			S	14	0:50	6:45	13:08	19:06	
P			11.1	1.0	11.7	0.8					12.4	—0.6	13.0	. . .					—0.6	12.8	—0.6	12.7	
	M	15	5:14	11:38	17:38	. . .		E	Th	15	0:39	6:32	12:57	18:54			S	15	1:28	7:24	13:47	19:45	
			11.5	0.5	12.1	. . .					—0.4	12.6	—0.7	13.0					0.0	12.3	0.1	11.9	
	Tu	16	0:07	6:02	12:28	18:27			F	16	1:20	7:14	13:38	19:36			M	16	2:05	8:02	14:26	20:26	
			0.5	11.8	0.2	12.3					—0.4	12.5	—0.5	12.6					0.8	11.5	1.0	11.0	
	W	17	0:55	6:50	13:16	19:16			S	17	2:00	7:56	14:20	20:20			Tu	17	2:46	8:45	15:11	21:11	
			0.3	11.9	0.1	12.3					0.0	12.1	0.0	12.0					1.7	10.5	2.0	9.9	
	Th	18	1:43	7:37	14:04	20:03			S	18	2:42	8:40	15:04	21:05		☽ S	W	18	3:32	9:36	16:04	22:08	
			0.3	11.8	0.2	12.1					0.6	11.5	0.8	11.2					2.6	9.6	2.9	8.9	
E	F	19	2:30	8:25	14:51	20:54		☽	M	19	3:26	9:26	15:52	21:55			Th	19	4:34	10:42	17:18	23:28	
			0.5	11.5	0.4	11.6					1.4	10.6	1.6	10.2					3.3	8.7	3.6	8.2	
	S	20	3:18	9:16	15:41	21:44			Tu	20	4:16	10:20	16:47	22:54			F	20	5:56	12:09	18:47	. . .	
			0.9	11.1	0.9	11.0					2.2	9.8	2.4	9.3					3.7	8.4	3.7	. . .	
☽	S	21	4:07	10:10	16:32	22:40			W	21	5:18	11:27	17:55	. . .		A	S	21	1:01	7:21	13:33	20:07	
			1.4	10.5	1.4	10.4					2.9	9.1	3.0	. . .					8.2	3.5	8.7	3.3	
	M	22	5:02	11:08	17:30	23:42		S	Th	22	0:08	7:32	12:44	19:17			S	22	2:12	8:30	14:34	21:05	
			1.9	10.0	2.0	9.9					8.7	3.3	8.8	3.2					8.8	2.8	9.5	2.6	
	Tu	23	6:02	12:12	18:35	. . .			F	23	1:30	7:50	14:00	20:31			M	23	3:02	9:20	15:20	21:46	
			2.4	9.6	2.3	. . .					8.7	3.2	9.1	3.0					9.5	2.0	10.3	1.9	
	W	24	0:48	7:08	13:20	19:42			S	24	2:38	8:58	15:00	21:31			Tu	24	3:42	10:00	15:56	22:21	
			9.6	2.6	9.5	2.5					9.0	2.7	9.6	2.5					10.3	1.3	11.0	1.3	
	Th	25	1:56	8:16	14:22	20:48		A	S	25	3:29	9:50	15:47	22:18			W	25	4:14	10:32	16:30	22:50	
			9.5	2.6	9.7	2.4					9.6	2.0	10.2	1.9					10.9	0.8	11.6	0.9	
S	F	26	2:54	9:15	15:18	21:47			M	26	4:10	10:32	16:26	22:56		E ○	Th	26	4:42	11:02	16:59	23:16	
			9.6	2.3	10.0	2.1					10.1	1.4	10.8	1.4					11.5	0.4	12.0	0.6	
	S	27	3:46	10:08	16:05	22:36		○	Tu	27	4:45	11:08	17:00	23:27			F	27	5:12	11:30	17:30	23:42	
			9.9	1.9	10.3	1.8					10.6	1.0	11.3	1.1					11.8	0.3	12.3	0.5	
	S	28	4:28	10:52	16:46	23:17			W	28	5:14	11:38	17:31	23:53			S	28	5:40	11:55	17:58	. . .	
			10.1	1.6	10.6	1.7					11.0	0.8	11.6	1.0					12.1	0.3	12.3	. . .	
○ A	M	29	5:07	11:31	17:22	23:52			Th	29	5:42	12:04	18:00	. . .			S	29	0:08	6:11	12:24	18:29	
			10.3	1.4	10.9	1.6					11.3	0.7	11.9	. . .					0.5	12.1	0.4	12.1	
	Tu	30	5:40	12:04	17:55	. . .		E	F	30	0:16	6:10	12:28	18:28			M	30	0:35	6:44	12:54	19:02	
			10.5	1.3	11.0	. . .					0.9	11.6	0.6	12.0					0.6	12.0	0.6	11.7	
	W	31	0:23	6:08	12:33	18:26			S	31	0:42	6:39	12:54	18:58									
			1.5	10.7	1.3	11.2					0.9	11.7	0.7	11.9									

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Dublin Mean Civil for the meridian 6° 20′ W.: 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

OCTOBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Tu	1	1:06	7:20	13:30	19:40
			0.9	11.5	1.1	11.0
	W	2	1:47	8:02	14:13	20:25
			1.5	10.8	1.8	10.1
N	Th	3	2:35	8:57	15:10	21:24
☾			2.2	9.9	2.6	9.2
	F	4	3:42	10:09	16:34	22:52
			3.1	9.1	3.4	8.4
	S	5	5:20	11:50	18:24	. . .
			3.5	8.7	3.5	. . .
	S	6	0:40	7:05	13:23	19:54
			8.6	3.0	9.4	2.6
P	M	7	2:03	8:20	14:30	20:57
			9.6	1.9	10.5	1.5
	Tu	8	3:00	9:17	15:23	21:45
			10.8	0.8	11.7	0.5
E	W	9	3:47	10:08	16:07	22:30
			11.8	—0.2	12.5	—0.3
●	Th	10	4:28	10:47	16:47	23:08
			12.6	—0.8	13.0	—0.7
	F	11	5:05	11:25	17:23	23:47
			12.9	—1.0	13.2	—0.7
	S	12	5:22	12:03	18:01	. . .
			12.9	—0.8	12.9	. . .
	S	13	0:22	6:17	12:40	18:37
			—0.3	12.6	—0.2	12.3
	M	14	0:58	6:54	13:17	19:12
			0.4	12.0	0.6	11.5
	Tu	15	1:34	7:31	13:55	19:50
			1.2	11.3	1.6	10.6
S	W	16	2:12	8:12	14:37	20:33
			2.0	10.3	2.3	9.6
	Th	17	2:55	9:00	15:30	21:27
			2.8	9.5	3.2	8.7
☽	F	18	3:56	10:05	16:40	22:43
			3.5	8.7	3.7	8.1
A	S	19	5:15	11:27	18:06	. . .
			3.8	8.4	3.8	. . .
	S	20	0:15	6:37	12:50	19:22
			3.0	3.5	8.6	3.4
	M	21	1:30	7:48	13:53	20:17
			8.6	2.9	9.4	2.7
	Tu	22	2:20	8:32	14:40	21:00
			9.5	2.1	10.2	2.0
E	W	23	3:00	9:13	15:18	21:35
			10.3	1.4	11.0	1.4
	Th	24	3:35	9:50	15:58	22:08
			11.0	0.8	11.6	0.9
	F	25	4:08	10:23	16:25	22:40
			11.6	0.5	12.0	0.6
○	S	26	4:40	10:55	16:58	23:10
			12.0	0.2	12.2	0.4
	S	27	5:15	11:27	17:31	23:41
			12.2	0.2	12.2	0.5
	M	28	5:47	12:01	18:05	. . .
			12.2	0.4	12.0	. . .
	Tu	29	0:15	6:24	12:37	18:42
			0.7	11.9	0.8	11.5
N	W	30	0:58	7:05	13:18	19:25
			1.1	11.4	1.4	10.8
	Th	31	1:37	7:58	14:09	20:15
			1.8	10.7	2.1	9.9

NOVEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	F	1	2:32	8:52	15:15	21:22
			2.5	9.8	2.9	9.1
☾	S	2	3:50	10:09	16:43	22:52
			3.0	9.2	3.3	8.6
P	S	3	5:23	11:42	18:15	. . .
			3.1	9.2	3.0	. . .
	M	4	0:27	6:48	13:08	19:30
			9.0	2.5	9.8	2.3
E	Tu	5	1:40	7:55	14:07	20:29
			9.9	1.6	10.7	1.4
	W	6	2:35	8:50	14:58	21:18
			10.9	0.7	11.6	0.6
	Th	7	3:21	9:38	15:43	22:03
			11.7	0.0	12.2	0.0
	F	8	4:02	10:22	16:23	22:45
			12.2	—0.4	12.5	—0.2
●	S	9	4:41	11:02	17:01	23:22
			12.5	—0.4	12.5	0.0
	S	10	5:18	11:40	17:37	23:59
			12.4	0.0	12.2	0.3
	M	11	5:53	12:20	18:12	. . .
			12.0	0.4	11.6	. . .
S	Tu	12	0:35	6:30	12:55	18:48
			0.9	11.6	1.1	11.0
	W	13	1:12	7:08	13:33	19:25
			1.5	10.9	1.8	10.3
	Th	14	1:50	7:48	14:15	20:06
			2.2	10.3	2.5	9.6
	F	15	2:32	8:35	15:03	20:56
			2.8	9.6	3.1	8.9
A	S	16	3:25	9:31	16:00	21:58
☽			3.2	9.1	3.5	8.5
	S	17	4:28	10:38	17:08	23:12
			3.4	8.8	3.6	8.4
	M	18	5:35	11:50	18:18	. . .
			3.3	8.9	3.3	. . .
	Tu	19	0:23	6:38	12:53	19:11
			8.7	2.9	9.3	2.9
E	W	20	1:22	7:32	13:47	20:00
			9.3	2.4	9.9	2.3
	Th	21	2:10	8:20	14:33	20:44
			10.1	1.8	10.6	1.7
	F	22	2:52	9:04	15:15	21:25
			10.8	1.3	11.1	1.2
	S	23	3:33	9:45	15:54	22:05
			11.3	0.8	11.5	0.9
○	S	24	4:12	10:25	16:32	22:45
			11.8	0.6	11.8	0.7
	M	25	4:51	11:07	17:12	23:25
			12.0	0.6	11.8	0.7
N	Tu	26	5:32	11:48	17:52	. . .
			12.0	0.7	11.6	. . .
	W	27	0:07	6:15	12:32	18:35
			0.9	11.8	1.0	11.3
P	Th	28	0:58	7:01	13:21	19:22
			1.2	11.4	1.5	10.8
	F	29	1:45	7:53	14:18	20:17
			1.7	10.9	2.0	10.2
	S	30	2:45	8:53	15:22	21:22
			2.1	10.3	2.4	9.6

DECEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
☾	S	1	3:53	10:02	16:34	22:38
			2.3	9.9	2.5	9.4
	M	2	5:05	11:17	17:45	23:55
			2.3	9.8	2.4	9.5
E	Tu	3	6:15	12:30	18:54	. . .
			2.0	10.1	2.1	. . .
	W	4	1:04	7:20	13:33	19:54
			10.0	1.6	10.5	1.6
	Th	5	2:02	8:18	14:30	20:50
			10.6	1.1	11.1	1.1
	F	6	2:53	9:11	15:18	21:38
			11.1	0.8	11.4	0.8
	S	7	3:39	10:00	16:02	22:23
			11.5	0.5	11.5	0.6
●	S	8	4:21	10:45	16:43	23:06
			11.6	0.5	11.5	0.7
S	M	9	5:00	11:27	17:22	23:45
			11.6	0.7	11.3	0.9
	Tu	10	5:40	12:07	17:59	. . .
			11.4	1.1	11.0	. . .
	W	11	0:23	6:16	12:45	18:33
			1.3	11.2	1.5	10.6
	Th	12	1:00	6:53	13:20	19:10
			1.7	10.8	1.9	10.2
	F	13	1:35	7:30	13:57	19:47
			2.0	10.5	2.3	9.9
A	S	14	2:12	8:12	14:36	20:28
			2.4	10.1	2.6	9.6
	S	15	2:54	8:58	15:18	21:15
			2.6	9.8	2.8	9.3
☽	M	16	3:40	9:48	16:07	22:10
			2.7	9.6	2.9	9.2
E	Tu	17	4:30	10:44	16:58	23:09
			2.7	9.4	2.9	9.1
	W	18	5:25	11:44	17:54	. . .
			2.7	9.4	2.8	. . .
	Th	19	0:10	6:22	12:42	18:52
			9.3	2.5	9.6	2.5
	F	20	1:12	7:22	13:42	19:50
			9.7	2.2	10.0	2.2
	S	21	2:08	8:18	14:37	20:45
			10.2	1.9	10.4	1.8
	S	22	3:00	10:14	15:27	21:38
			10.7	1.5	10.8	1.4
	M	23	3:50	10:07	16:14	22:30
			11.2	1.5	11.2	1.1
N	Tu	24	4:38	10:57	17:00	23:20
○			11.6	0.9	11.4	0.9
	W	25	5:25	11:47	17:46	. . .
			11.8	0.8	11.5	. . .
P	Th	26	0:08	6:11	12:35	18:33
			0.7	11.9	0.8	11.5
	F	27	0:58	7:00	13:26	19:22
			0.7	11.9	0.9	11.3
	S	28	1:48	7:50	14:17	20:12
			0.9	11.6	1.1	11.0
	S	29	2:40	8:43	15:10	21:00
			1.1	11.2	1.4	10.6
E	M	30	3:36	9:40	16:06	22:08
☾			1.3	10.8	1.7	10.3
	Tu	31	4:33	10:42	17:06	23:12
			1.6	10.4	2.0	10.0

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the Admiralty Charts for this region, and which is 6.0 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Dublin Mean Civil for the meridian 6° 20′ W.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.: E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JANUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:58 6.1	9:05 0.5	14:26 6.8	21:46 —0.2
	Tu	2	3:03 6.2	10:15 0.1	15:30 6.7	22:45 —0.4
	W	3	4:08 6.4	11:18 —0.2	16:32 6.5	23:42 —0.6
N ○ P	Th	4	5:08 6.6	12:18 —0.4	17:31 6.3	. . . . .
	F	5	0:35 —0.7	6:00 6.8	13:10 —0.4	18:24 6.1
	S	6	1:22 —0.6	6:48 6.9	14:02 —0.3	19:10 5.9
	S	7	2:07 —0.4	7:32 7.0	14:50 —0.1	19:50 5.7
	M	8	2:49 —0.1	8:13 7.0	15:36 0.1	20:26 5.5
	Tu	9	3:29 0.2	8:54 7.0	16:20 0.4	21:01 5.5
E	W	10	4:06 0.6	9:35 7.0	17:02 0.6	21:39 5.4
☾	Th	11	4:46 0.9	10:18 6.9	17:47 0.8	22:24 5.4
	F	12	5:32 1.1	11:04 6.7	18:34 0.9	23:14 5.4
	S	13	6:30 1.1	11:54 6.4	19:28 0.9	. . . . .
	S	14	0:18 5.4	7:36 1.1	12:48 6.2	20:25 0.8
	M	15	1:15 5.4	8:46 0.9	13:48 5.9	21:28 0.6
	Tu	16	2:21 5.5	9:54 0.7	14:49 5.6	22:20 0.4
S	W	17	3:26 5.6	10:56 0.6	15:50 5.4	23:13 0.2
A	Th	18	4:26 5.8	11:53 0.5	16:45 5.8	. . . . .
●	F	19	0:02 0.1	5:18 6.0	12:44 0.5	17:32 5.2
	S	20	0:46 0.2	6:02 6.2	13:29 0.6	18:10 5.3
	S	21	1:24 0.3	6:40 6.4	14:09 0.7	18:43 5.4
	M	22	1:58 0.5	7:17 6.6	14:41 0.8	19:16 5.6
	Tu	23	2:20 0.8	7:52 6.9	15:06 0.9	19:50 5.9
E	W	24	2:29 1.0	8:30 7.1	15:28 0.9	20:32 6.2
	Th	25	2:44 0.8	9:10 7.3	15:55 0.7	21:17 6.4
	F	26	3:16 0.5	9:56 7.4	16:36 0.6	22:08 6.6
☽	S	27	4:08 0.6	10:46 7.4	17:30 0.6	23:04 6.6
	S	28	5:14 0.8	11:41 7.2	18:39 0.6	. . . . .
	M	29	0:06 6.4	6:50 1.0	12:42 6.9	19:56 0.5
	Tu	30	1:15 6.3	8:28 0.7	13:50 6.6	21:09 0.2
N	W	31	2:26 6.3	9:47 0.3	15:00 6.3	22:18 —0.2

FEBRUARY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	3:38 6.5	10:57 —0.2	16:11 6.2	23:18 —0.5
P	F	2	4:45 6.7	11:58 —0.5	17:15 6.1	. . . . .
○	S	3	0:14 —0.7	5:42 6.9	12:55 —0.7	18:13 6.0
	S	4	1:04 —0.8	6:35 7.1	13:46 —0.7	19:02 5.9
	M	5	1:50 —0.8	7:20 7.2	14:33 —0.5	19:42 5.8
E	Tu	6	2:32 —0.5	8:00 7.2	15:16 —0.3	20:16 5.7
	W	7	3:11 —0.2	8:39 7.1	15:57 0.1	20:47 5.7
	Th	8	3:49 0.2	9:15 7.0	16:33 0.5	21:19 5.7
	F	9	4:24 0.6	9:51 6.8	17:09 0.8	21:56 5.8
☾	S	10	5:00 1.0	10:30 6.6	17:48 1.1	22:40 5.8
	S	11	5:49 1.3	11:14 6.3	18:35 1.3	23:30 5.8
	M	12	6:55 1.4	12:03 5.9	19:35 1.3	. . . . .
S	Tu	13	0:31 5.7	8:11 1.3	13:00 5.5	20:40 1.1
A	W	14	1:38 5.6	9:25 1.1	14:04 5.2	21:44 0.8
	Th	15	2:47 5.6	10:31 0.9	15:12 5.1	22:43 0.5
	F	16	3:54 5.7	11:30 0.7	16:16 5.0	23:35 0.3
	S	17	4:52 5.9	12:20 0.5	17:12 5.1	. . . . .
●	S	18	0:24 0.1	5:41 6.2	13:07 0.4	17:56 5.3
	M	19	1:05 0.1	6:21 6.4	13:45 0.4	18:32 5.5
	Tu	20	1:40 0.3	6:58 6.7	14:18 0.4	19:05 5.8
E	W	21	2:10 0.5	7:32 6.9	14:44 0.6	19:37 6.1
	Th	22	2:27 0.7	8:08 7.2	15:05 0.7	20:14 6.4
	F	23	2:40 0.7	8:45 7.3	15:25 0.6	20:56 6.7
	S	24	3:08 0.5	9:28 7.4	15:56 0.5	21:42 6.8
☽	S	25	3:44 0.4	10:14 7.3	16:41 0.5	22:34 6.8
	M	26	4:45 0.6	11:08 7.0	17:41 0.7	23:33 6.7
N	Tu	27	6:13 1.0	12:08 6.6	19:10 0.9	. . . . .
	W	28	0:40 6.5	8:00 0.8	13:16 6.2	20:36 0.6
	Th	29	1:55 6.4	9:23 0.4	14:32 5.9	21:50 0.1

MARCH.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
P	F	1	3:10 6.5	10:35 —0.1	15:48 5.8	22:58 —0.4
	S	2	4:20 6.8	11:38 —0.6	16:58 5.9	23:51 —0.8
○	S	3	5:21 7.0	12:33 —0.8	17:57 6.0	. . . . .
E	M	4	0:41 —1.0	6:14 7.2	13:23 —0.9	18:45 6.0
	Tu	5	1:29 —1.0	6:59 7.2	14:09 —0.8	19:24 6.0
	W	6	2:10 —0.8	7:40 7.2	14:50 —0.5	19:57 6.0
	Th	7	2:50 —0.4	8:15 7.0	15:27 0.0	20:25 6.0
	F	8	3:27 0.1	8:48 6.8	16:00 0.4	20:53 6.0
	S	9	4:00 0.6	9:20 6.6	16:28 0.9	21:28 6.1
☾	S	10	4:34 1.0	9:54 6.3	16:56 1.3	22:08 6.1
	M	11	5:18 1.4	10:32 6.0	17:24 1.6	22:56 6.0
S	Tu	12	6:15 1.6	11:19 5.7	18:29 1.7	23:54 5.9
A	W	13	7:25 1.6	12:15 5.3	19:52 1.5	. . . . .
	Th	14	1:00 5.8	8:53 1.3	13:28 5.0	21:06 1.1
	F	15	2:11 5.8	10:02 1.0	14:38 4.9	22:10 0.7
	S	16	3:20 5.9	11:00 0.6	15:49 5.0	23:07 0.3
	S	17	4:22 6.1	11:51 0.3	16:49 5.2	23:57 0.1
●	M	18	5:14 6.3	12:36 0.1	17:37 5.5	. . . . .
E	Tu	19	0:42 0.0	6:58 6.6	13:16 0.0	18:15 5.7
	W	20	1:20 0.1	6:35 6.7	13:50 0.1	18:48 6.0
	Th	21	1:58 0.3	7:10 6.9	14:20 0.3	19:22 6.3
	F	22	2:18 0.6	7:44 7.0	14:42 0.5	19:57 6.6
	S	23	2:34 0.7	8:21 7.1	15:00 0.6	20:35 6.8
	S	24	2:56 0.7	9:02 7.1	15:25 0.6	21:20 6.9
	M	25	3:36 0.7	9:45 6.9	16:00 0.7	22:10 6.9
N ☽	Tu	26	4:34 0.8	10:36 6.6	16:54 0.9	23:08 6.8
	W	27	6:00 1.0	11:36 6.2	18:30 1.2	. . . . .
P	Th	28	0:14 6.6	7:40 0.8	12:46 5.8	20:04 0.9
	F	29	1:26 6.5	9:01 0.4	14:04 5.6	21:20 0.3
	S	30	2:41 6.6	10:12 —0.1	15:22 5.6	22:25 —0.2
	S	31	3:52 6.8	11:12 —0.6	16:33 5.8	23:23 —0.7

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the German Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Central European for the Meridian 15° E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

APRIL.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
E ○	M	1	4:54	12:06	17:30	. . .
			7.1	—0.9	6.0	. . .
	Tu	2	0:16	5:47	12:54	18:18
			—1.0	7.2	—1.0	6.1
	W	3	1:04	6:33	13:40	18:57
			—1.0	7.1	—0.8	6.2
	Th	4	1:48	7:13	14:20	19:30
			—0.7	6.9	—0.5	6.2
	F	5	2:29	7:47	14:54	20:00
			—0.3	6.7	0.0	6.2
	S	6	3:06	8:17	15:25	20:29
			—0.2	6.4	0.5	6.3
	S	7	3:41	8:46	15:49	21:03
			0.7	6.2	1.0	6.3
S	M	8	4:15	9:17	15:55	21:42
			1.1	6.0	1.1	6.4
☾	Tu	9	4:49	9:54	15:58	22:30
			1.5	5.8	1.2	6.3
A	W	10	5:47	10:40	16:38	23:24
			1.7	5.6	1.5	6.2
	Th	11	7:02	11:37	18:50	. . .
			1.6	5.8	1.8	. . .
	F	12	0:27	8:16	12:47	20:28
			6.1	1.8	5.1	1.8
	S	13	1:36	9:25	14:02	21:32
			6.1	0.9	5.1	0.8
	S	14	2:45	10:28	15:16	22:32
			6.1	0.5	5.2	0.4
E	M	15	3:47	11:14	16:19	23:26
			6.3	0.1	5.5	0.1
	Tu	16	4:42	12:01	17:10	. . .
			6.5	—0.2	5.8	. . .
●	W	17	0:14	5:29	12:44	17:53
			0.0	6.7	—0.3	6.0
	Th	18	0:56	6:10	13:21	18:30
			0.0	6.7	—0.2	6.2
	F	19	1:36	6:47	13:56	19:06
			0.2	6.7	0.1	6.4
	S	20	2:09	7:23	14:20	19:41
			0.5	6.7	0.4	6.6
	S	21	2:39	8:00	14:48	20:20
			0.7	6.7	0.7	6.8
N P	M	22	3:10	8:37	15:06	21:03
			0.9	6.6	0.9	6.9
	Tu	23	3:50	9:22	15:36	21:52
			1.0	6.4	1.0	6.9
☽	W	24	4:50	10:12	16:24	22:48
			1.0	6.1	1.2	6.8
	Th	25	6:07	11:11	18:04	23:52
			1.0	5.8	1.3	6.7
	F	26	7:24	12:20	19:34	. . .
			0.8	5.5	1.0	. . .
	S	27	1:01	8:38	13:34	20:49
			6.7	0.4	5.4	0.4
E	S	28	2:11	9:44	14:51	21:54
			6.7	—0.1	5.5	—0.1
	M	29	3:20	10:42	16:00	22:53
			6.8	—0.5	5.7	—0.5
	Tu	30	4:20	11:25	16:57	23:48
			7.0	—0.8	6.0	—0.7

MAY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
○	W	1	5:15	12:23	17:45	. . .
			6.9	—0.8	6.1	. . .
	Th	2	0:38	6:02	13:07	18:26
			—0.7	6.8	—0.7	6.2
	F	3	1:25	6:42	13:47	19:01
			—0.5	6.5	—0.3	6.3
	S	4	2:08	7:15	14:23	19:32
			—0.1	6.2	0.1	6.3
S	S	5	2:48	7:46	14:53	20:05
			0.4	5.9	0.7	6.4
	M	6	3:25	8:13	15:13	20:40
			0.9	5.8	1.2	6.5
A	Tu	7	3:58	8:44	15:21	21:20
			1.2	5.7	1.3	6.6
	W	8	4:36	9:22	15:35	22:06
			1.5	5.6	1.3	6.6
☾	Th	9	5:22	10:08	16:00	22:58
			1.6	5.5	1.3	6.5
	F	10	6:27	11:07	17:18	23:58
			1.5	5.4	1.6	6.5
	S	11	7:34	12:14	19:33	. . .
			1.2	5.4	1.3	. . .
	S	12	1:01	8:40	13:27	20:48
			6.4	0.8	5.4	0.9
E	M	13	2:06	9:39	14:38	21:52
			6.5	0.3	5.5	0.5
	Tu	14	3:09	10:43	15:42	22:50
			6.6	—0.1	5.8	0.1
	W	15	4:06	11:23	16:40	23:44
			6.7	—0.4	6.0	0.0
●	Th	16	4:58	12:11	17:28	. . .
			6.7	—0.4	6.2	. . .
	F	17	0:34	5:44	12:55	18:10
			0.0	6.6	—0.3	6.4
	S	18	1:19	6:26	13:35	18:50
			0.1	6.5	—0.1	6.5
N P	S	19	2:01	7:04	14.12	19:29
			0.3	6.3	0.3	6.6
	M	20	2:43	7:42	14:45	20:10
			0.6	6.2	0.7	6.7
	Tu	21	3:23	8:22	15:16	20:52
			0.8	6.0	1.0	6.8
	W	22	4:09	9:05	15:47	21:40
			0.9	5.8	1.3	6.9
☽	Th	23	5:02	9:58	16:37	22:32
			1.0	5.7	1.3	6.9
	F	24	6:02	10:48	17:50	23:31
			0.9	5.5	1.3	6.8
E	S	25	7:07	11:52	19:06	. . .
			0.7	5.4	1.0	. . .
	S	26	0:35	8:11	13:08	20:16
			6.8	0.4	5.4	0.6
	M	27	1:39	9:12	14:12	21:21
			6.8	0.1	5.5	0.2
	Tu	28	2:42	10:08	15:19	22:21
			6.7	—0.2	5.7	—0.2
	W	29	3:44	11:01	16:18	23:19
			6.7	—0.5	5.9	—0.3
	Th	30	4:39	11:50	17:10	. . .
			6.5	—0.5	6.1	. . .
○	F	31	0:14	5:28	12:36	17:54
			—0.3	6.3	—0.4	6.2

JUNE.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
S	S	1	1:04	6:10	13:18	18:34
			—0.1	6.0	—0.1	6.2
	S	2	1:50	6:45	13:55	19:08
			0.3	5.7	0.2	6.3
	M	3	2:32	7:13	14:26	19:42
			0.6	5.5	0.7	6.4
A	Tu	4	3:10	7:42	14:40	20:20
			1.0	5.5	1.1	6.6
	W	5	3:43	8:14	14:50	21:00
			1.3	5.5	1.4	6.7
	Th	6	4:17	8:55	14:54	21:44
			1.4	5.6	1.2	6.8
	F	7	4:57	9:43	15:40	22:33
			1.4	5.7	1.1	6.8
☾	S	8	5:50	10:40	16:46	23:28
			1.2	5.7	1.2	6.8
E	S	9	6:48	11:42	18:27	. . .
			1.0	5.8	1.3	. . .
	M	10	0:25	7:50	12:50	20:00
			6.8	0.7	5.8	1.0
	Tu	11	1:28	8:52	13:58	21:10
			6.8	0.3	5.9	0.6
	W	12	2:30	9:52	15:04	22:15
			6.8	—0.1	6.1	0.3
	Th	13	3:30	10:57	16:05	23:14
			6.7	—0.3	6.2	0.1
	F	14	4:27	11:41	17:01	. . .
			6.6	—0.4	6.4	. . .
● N	S	15	0:11	5:20	12:30	17:51
			0.0	6.4	—0.4	6.5
P	S	16	1:04	6:09	13:17	18:38
			0.0	6.2	—0.2	6.6
	M	17	1:54	6:53	14:00	19:20
			0.1	6.0	0.0	6.7
	Tu	18	2:41	7:35	14:42	20:02
			0.3	5.8	0.3	6.8
	W	19	3:26	8:12	15:20	20:45
			0.5	5.6	0.7	6.9
	Th	20	4:12	8:56	15:58	21:30
			0.6	5.5	0.9	6.9
☽	F	21	5:00	9:38	16:41	22:19
			0.7	5.5	1.0	6.9
E	S	22	5:49	10:28	17:34	23:10
			0.7	5.4	1.1	6.9
	S	23	6:42	11:25	18:35	. . .
			0.7	5.4	1.0	. . .
	M	24	0:06	7:38	12:25	19:42
			6.8	0.6	5.5	0.7
	Tu	25	1:04	8:35	13:30	20:48
			6.6	0.4	5.5	0.5
	W	26	2:03	9:31	14:35	21:52
			6.4	0.2	5.6	0.3
	Th	27	3:02	10:25	15:38	22:53
			6.2	0.0	5.8	0.2
	F	28	4:01	11:19	16:34	23:51
			6.0	—0.1	5.9	0.2
S ○	S	29	4:54	12:08	17:25	. . .
			5.7	—0.1	6.0	. . .
	S	30	0:44	5:40	12:51	18:09
			0.3	5.5	0.1	6.1

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the German Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (—) sign is before the height, in which case subtract it.

The time used is Central European, for the meridian 15° E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p.m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

JULY.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	M	1	1:32 0.5	6:18 5.4	13:31 0.3	18:48 6.3
A	Tu	2	2:16 0.7	6:51 5.3	14:06 0.6	19:25 6.4
	W	3	2:55 1.0	7:22 5.3	14:34 1.0	20:00 6.6
	Th	4	3:26 1.2	7:55 5.5	14:45 1.2	20:39 6.8
	F	5	3:55 1.2	8:34 5.7	14:59 1.2	21:20 7.0
E	S	6	4:24 1.2	9:20 5.9	15:21 1.0	22:04 7.1
☾	S	7	5:08 1.0	10:11 6.1	16:12 0.9	22:54 7.1
	M	8	5:56 0.9	11:08 6.2	17:20 1.0	23:43 7.0
	Tu	9	6:55 0.7	12:10 6.2	18:53 1.1	. . . . .
	W	10	0:47 6.9	8:04 0.4	13:19 6.2	20:23 0.8
	Th	11	1:50 6.8	9:10 0.2	14:25 6.3	21:40 0.4
	F	12	2:55 6.6	10:13 −0.1	15:32 6.4	22:48 0.1
N	S	13	4:00 6.5	11:12 −0.4	16:35 6.6	23:50 −0.2
●	S	14	5:01 6.3	12:08 −0.5	17:33 6.7	. . . . .
P	M	15	0:47 −0.3	5:57 6.1	12:59 −0.5	18:25 6.8
	Tu	16	1:40 −0.3	6:47 5.9	13:46 −0.4	19:12 6.9
	W	17	2:30 −0.2	7:31 5.7	14:30 −0.2	19:55 7.0
	Th	18	3:16 0.0	8:10 5.6	15:12 0.1	20:38 7.0
E	F	19	4:00 0.2	8:48 5.5	15:51 0.4	21:18 7.0
	S	20	4:43 0.5	9:25 5.5	16:31 0.7	21:59 6.9
☽	S	21	5:26 0.7	10:07 5.5	17:14 0.9	22:43 6.8
	M	22	6:10 0.8	10:52 5.5	18:05 1.0	23:31 6.5
	Tu	23	7:00 0.9	11:47 5.6	19:06 1.1	. . . . .
	W	24	0:24 6.3	7:55 0.9	12:46 5.6	20:16 1.0
	Th	25	1:20 6.0	8:52 0.7	13:50 5.6	21:23 0.8
S	F	26	2:20 5.7	9:51 0.5	14:55 5.7	22:28 0.6
	S	27	3:22 5.5	10:47 0.3	16:00 5.8	23:29 0.5
	S	28	4:22 5.3	11:38 0.1	16:56 6.0	. . . . .
○ A	M	29	0:28 0.4	5:14 5.2	12:26 0.1	17:46 6.2
	Tu	30	1:12 0.5	5:58 5.2	13:06 0.2	18:28 6.3
	W	31	1:54 0.6	6:33 5.2	13:47 0.4	19:05 6.5

AUGUST.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	Th	1	2:32 0.7	7:05 5.4	14:16 0.7	19:39 6.7
E	F	2	3:00 0.9	7:39 5.7	14:35 1.0	20:15 6.9
	S	3	3:24 1.0	8:14 6.0	14:40 1.0	20:54 7.1
	S	4	3:45 1.0	8:57 6.2	15:02 0.8	21:35 7.2
	M	5	4:13 0.8	9:44 6.5	15:45 0.7	22:21 7.2
☾	Tu	6	4:58 0.7	10:38 6.5	16:40 0.7	23:13 7.1
	W	7	5:56 0.7	11:45 6.5	18:00 1.0	. . . . .
	Th	8	0:11 6.9	7:13 0.7	12:41 6.4	19:45 1.0
N	F	9	1:16 6.6	8:32 0.5	13:51 6.4	21:11 0.6
	S	10	2:24 6.3	9:43 0.1	15:04 6.5	22:24 0.1
	S	11	3:36 6.2	10:46 −0.3	16:12 6.7	23:30 −0.3
P ●	M	12	4:43 6.1	11:45 −0.6	17:14 6.9	. . . . .
	Tu	13	0:28 −0.6	5:45 6.1	12:39 −0.8	18:09 7.1
	W	14	1:21 −0.7	6:36 6.0	13:26 −0.8	18:57 7.2
E	Th	15	2:10 −0.6	7:21 5.9	14:11 −0.6	19:40 7.2
	F	16	2:55 −0.4	8:00 5.8	14:58 −0.3	21:20 7.1
	S	17	3:36 0.0	8:32 5.7	15:38 0.1	20:58 6.9
	S	18	4:16 0.3	9:04 5.7	16:10 0.5	21:34 6.8
☽	M	19	4:58 0.7	9:40 5.7	16:50 0.9	22:12 6.5
	Tu	20	5:31 1.1	10:21 5.8	17:35 1.2	22:53 6.2
	W	21	6:15 1.3	11:10 5.8	18:35 1.3	23:41 5.9
S	Th	22	7:10 1.4	12:07 5.7	19:45 1.3	. . . . .
	F	23	0:36 5.5	8:14 1.2	13:11 5.7	20:58 1.2
	S	24	1:38 5.2	9:17 0.9	14:20 5.7	22:07 0.9
A	S	25	2:47 5.1	10:18 0.6	15:28 5.8	23:05 0.7
	M	26	3:53 5.1	11:12 0.3	16:28 6.0	23:59 0.4
○	Tu	27	4:52 5.1	12:02 0.1	17:20 6.2	. . . . .
	W	28	0:46 0.3	5:38 5.3	12:46 0.0	18:04 6.4
	Th	29	1:27 0.3	6:16 5.4	13:24 0.2	18:41 6.6
E	F	30	2:01 0.4	6:49 5.7	13:57 0.4	19:16 6.8
	S	31	2:30 0.6	7:21 6.0	14:20 0.7	19:49 6.9

SEPTEMBER.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
	S	1	2:50 0.7	7:55 6.3	14:26 0.9	20:25 7.1
	M	2	3:05 0.8	8:33 6.6	14:42 0.7	21:04 7.2
	Tu	3	3:28 0.6	9:18 6.7	15:21 0.6	21:48 7.1
☾	W	4	4:06 0.6	10:08 6.8	16:14 0.7	22:38 6.9
	Th	5	5:00 0.7	11:05 6.7	17:28 1.0	23:36 6.6
N	F	6	6:20 1.0	12:10 6.6	19:20 1.0	. . . . .
	S	7	0:42 6.2	7:56 0.8	13:21 6.5	20:49 0.6
	S	8	1:56 6.0	9:15 0.8	14:36 6.6	22:03 0.0
P	M	9	3:14 5.9	10:22 −0.2	15:48 6.8	23:08 −0.5
	Tu	10	4:25 6.0	11:22 −0.7	16:51 7.1	. . . . .
●	W	11	0:05 −0.9	5:26 6.1	12:15 −1.0	17:47 7.3
E	Th	12	0:56 −1.0	6:20 6.2	13:05 −1.1	18:36 7.4
	F	13	1:43 −1.0	7:01 6.2	13:50 −0.9	19:20 7.3
	S	14	2:26 −0.7	7:38 6.1	14:31 −0.6	19:57 7.0
	S	15	3:07 −0.2	8:10 6.1	15:11 −0.1	20:31 6.8
	M	16	3:42 0.3	8:40 6.0	15:49 0.4	21:03 6.4
	Tu	17	4:16 0.8	9:18 6.0	16:26 0.9	21:37 6.1
☽ S	W	18	4:48 1.3	9:52 6.0	17:10 1.3	22:14 5.8
	Th	19	5:20 1.6	10:38 6.0	18:09 1.6	22:58 5.5
	F	20	6:15 1.8	11:33 5.9	19:20 1.6	23:52 5.2
A	S	21	7:30 1.6	12:37 5.8	20:33 1.4	. . . . .
	S	22	0:58 4.9	8:42 1.2	13:45 5.8	21:40 1.0
	M	23	2:12 4.9	9:45 0.8	14:55 5.9	22:38 0.7
	Tu	24	3:24 5.0	10:42 0.4	15:57 6.1	23:28 0.3
	W	25	4:26 5.2	11:34 0.1	16:52 6.3	. . . . .
E ○	Th	26	0:13 0.0	5:15 5.5	12:20 0.0	17:37 6.5
	F	27	0:54 0.0	5:55 5.7	13:00 0.0	18:15 6.7
	S	28	1:30 0.0	6:30 6.0	13:36 0.3	18:50 6.8
	S	29	2:00 0.3	7:08 6.2	14:02 0.6	19:23 6.8
	M	30	2:23 0.5	7:36 6.5	14:23 0.8	19:58 6.9

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the German Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart, unless a minus (−) sign is before the height, in which case subtract it.

The time used is Central European, for the meridian 15° E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

Moon.	Day of— W.	Mo.	Time and Height of High and Low Water.			
OCTOBER.						
	Tu	1	2:36 0.7	8:13 6.7	14:32 0.8	20:35 6.9
	W	2	2:54 0.7	8:55 6.8	15:08 0.7	21:18 6.8
N ☾	Th	3	3:24 0.7	9:43 6.9	16:00 0.8	22:07 6.6
	F	4	4:11 0.8	10:39 6.8	17:17 1.1	23:05 6.2
	S	5	5:25 1.2	11:42 6.7	19:03 1.0	. . . . .
	S	6	0:12 5.8	7:24 0.8	12:54 6.6	20:29 0.6
P	M	7	1:30 5.6	8:47 0.5	14:08 6.8	21:40 0.0
	Tu	8	2:49 5.7	9:55 −0.1	15:20 6.9	22:42 −0.6
E	W	9	4:00 5.9	10:55 −0.6	16:24 7.2	23:37 −1.0
●	Th	10	5:01 6.1	11:50 −1.0	17:20 7.4	. . . . .
	F	11	0:28 −1.2	5:52 6.8	12:39 −1.1	18:10 7.3
	S	12	1:14 −1.0	6:35 6.4	13:25 −0.9	18:52 7.1
	S	13	1:56 −0.7	7:12 6.4	14:10 −0.4	19:30 6.8
	M	14	2:36 −0.3	7:44 6.3	14:51 0.0	20:02 6.4
	Tu	15	3:10 0.3	8:16 6.3	15:30 0.5	20:31 6.0
S	W	16	3:40 0.9	8:49 6.3	16:08 1.0	21:02 5.8
	Th	17	4:00 1.5	9:27 6.2	16:51 1.5	21:35 5.6
☽	F	18	3:41 1.7	10:11 6.2	17:44 1.7	22:18 5.3
A	S	19	4:08 1.7	11:04 6.1	18:51 1.7	23:12 5.1
	S	20	5:30 2.0	12:05 6.0	20:00 1.5	. . . . .
	M	21	0:20 4.9	8:00 1.4	13:12 6.0	21:04 1.0
	Tu	22	1:35 4.9	9:08 1.0	14:18 6.1	22:01 0.6
E	W	23	2:49 5.1	10:18 0.5	15:21 6.3	22:52 0.1
	Th	24	3:58 5.5	11:02 0.2	16:16 6.5	23:38 −0.2
	F	25	4:46 5.8	11:50 0.0	17:05 6.7	. . . . .
○	S	26	0:21 −0.3	5:31 6.0	12:45 0.0	17:48 6.7
	S	27	1:00 −0.2	6:10 6.2	13:15 0.2	18:26 6.7
	M	28	1:34 0.0	6:45 6.4	13:50 0.5	19:00 6.6
	Tu	29	2:08 0.4	7:20 6.6	14:20 0.8	19:34 6.5
N	W	30	2:24 0.7	7:57 6.8	14:47 1.0	20:12 6.5
	Th	31	2:37 0.9	8:38 6.9	15:18 1.0	20:53 6.3
NOVEMBER.						
	F	1	2:57 0.9	9:26 6.9	16:13 1.1	21:42 6.1
☾	S	2	3:39 1.1	10:19 6.8	17:30 1.2	22:38 5.8
P	S	3	4:50 1.4	11:21 6.7	18:51 1.0	23:45 5.6
	M	4	6:53 1.2	12:29 6.7.	20:05 0.5	. . . . .
E	Tu	5	1:00 5.5	8:16 0.7	13:40 6.8	21:13 0.0
	W	6	2:17 5.5	9:24 0.1	14:48 6.9	22:18 −0.5
	Th	7	3:28 5.8	10:25 −0.4	15:52 7.1	23:07 −0.8
	F	8	4:28 6.1	11:21 −0.8	16:49 7.1	23:57 −1.0
●	S	9	5:21 6.3	12:14 −0.9	17:40 7.0	. . . . .
	S	10	0:41 −0.9	6:07 6.5	13:04 −0.7	18:24 6.7
	M	11	1:28 −0.7	6:46 6.5	13:50 −0.4	19:02 6.3
S	Tu	12	2:05 −0.2	7:20 6.5	14:34 0.1	19:34 6.0
	W	13	2:41 0.3	7:54 6.5	15:14 0.6	20:02 5.7
	Th	14	3:10 0.9	8:29 6.4	15:53 1.1	20:29 5.5
	F	15	3:25 1.5	9:06 6.5	16:32 1.5	21:03 5.4
A ☽	S	16	3:40 1.5	9:50 6.4	17:19 1.6	21:46 5.3
	S	17	3:50 1.5	10:38 6.4	18:13 1.6	22:40 5.2
	M	18	4:35 1.6	11:34 6.3	19:16 1.4	23:45 5.2
	Tu	19	7:02 1.6	12:35 6.3	20:17 1.0	. . . . .
E	W	20	0:56 5.2	8:22 1.2	13:39 6.3	21:15 0.6
	Th	21	2:08 5.4	9:27 0.7	14:41 6.4	22:09 0.1
	F	22	3:13 5.7	10:27 0.3	15:40 6.6	23:00 −0.2
	S	23	4:12 6.0	11:20 0.1	16:32 6.6	23:47 −0.4
○	S	24	5:04 6.2	12:12 0.0	17:20 6.6	. . . . .
	M	25	0:32 −0.3	5:49 6.4	12:58 0.1	18:04 6.5
N	Tu	26	1:14 −0.1	6:31 6.6	13:41 0.3	18:43 6.3
	W	27	1:50 0.2	7:10 6.7	14:22 0.6	19:21 6.1
P	Th	28	2:24 0.6	7:48 6.8	15:02 0.8	19:58 6.0
	F	29	2:50 1.0	8:30 6.9	15:44 1.0	20:39 5.9
	S	30	3:10 1.2	9:16 6.9	16:32 1.0	21:25 5.7
DECEMBER.						
☾	S	1	8:44 1.3	10:06 6.9	17:30 1.0	22:18 5.6
	M	2	4:50 1.4	11:02 6.9	18:32 0.9	23:19 5.5
E	Tu	3	6:24 1.2	12:08 6.8	19:38 0.6	. . . . .
	W	4	0:27 5.4	7:40 0.8	13:07 6.8	20:40 0.3
	Th	5	1:38 5.5	8:50 0.4	14:11 6.8	21:40 −0.1
	F	6	2:48 5.7	9:54 0.0	15:15 6.7	22:35 −0.4
	S	7	3:50 5.8	10:54 −0.3	16:14 6.6	23:26 −0.6
●	S	8	4:47 6.2	11:50 −0.4	17:08 6.4	. . . . .
S	M	9	0:14 −0.6	5:27 6.4	12:43 −0.3	17:56 6.1
	Tu	10	1:00 −0.5	6:20 6.4	13:32 −0.1	18:36 5.9
	W	11	1:40 −0.1	7:00 6.5	14:18 0.3	19:08 5.6
	Th	12	2:16 0.3	7:35 6.5	15:02 0.7	19:37 5.4
	F	13	2:47 0.8	8:10 6.6	15:39 1.0	20:05 5.4
A	S	14	3:08 1.2	8:46 6.7	16:12 1.3	20:40 5.4
	S	15	3:10 1.3	9:27 6.7	16:48 1.4	21:22 5.5
☽	M	16	3:18 1.3	10:12 6.7	17:28 1.4	22:13 5.6
E	Tu	17	4:10 1.3	11:02 6.7	18:20 1.3	23:11 5.7
	W	18	5:22 1.4	11:57 6.7	19:20 1.0	. . . . .
	Th	19	0:16 5.7	7:18 1.3	12:56 6.6	20:23 0.7
	F	20	1:25 5.8	8:40 1.0	13:58 6.6	21:24 0.3
	S	21	2:32 5.9	9:48 0.6	15:00 6.5	22:22 −0.1
	S	22	3:36 6.1	10:50 0.3	16:00 6.5	23:17 −0.3
	M	23	4:36 6.3	11:50 0.1	16:56 6.4	. . . . .
N ○	Tu	24	0:08 −0.4	5:30 6.5	12:44 0.0	17:48 6.2
	W	25	0:56 −0.3	6:18 6.6	13:33 0.1	18:33 6.0
P	Th	26	1:40 −0.1	7:02 6.8	14:20 0.2	19:15 5.9
	F	27	2:20 0.2	7:48 6.9	15:04 0.4	19:54 5.7
	S	28	2:57 0.5	8:25 7.0	15:47 0.5	20:33 5.6
	S	29	3:33 0.8	9:08 7.0	16:30 0.7	21:15 5.6
E ☾	M	30	4:10 1.0	9:53 7.0	17:17 0.8	22:00 5.6
	T	31	4:55 1.1	10:42 7.0	18:07 0.8	22:52 5.6

The tides are placed in the order of occurrence, with their times on the first line and heights on the second line of each day; a comparison of consecutive heights will indicate whether it is high or low water. The heights, in feet and tenths, are reckoned from Mean Low Water Springs, which is approximately the datum of soundings on the German Charts for this region, and which is 3.2 feet below mean sea level. To find the depth of water, add the tabular height to the soundings given on the chart unless a minus (−) sign is before the height, in which case subtract it.

The time used is Central European for the meridian 15° E.; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:47 is 3:47 p. m.

●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator; A, P, moon in apogee or perigee.

For finding the height of the sea or tide at any intermediate hour between High and Low Water.

Range of Tide.	Subtract from height of High Water.						Add to height of Low Water.						Range of Tide.
	Hours before High Water.			Hours after High Water.			Hours before Low Water.			Hours after Low Water.			
	3	2	1	1	2	3	3	2	1	1	2	3	
Feet.	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*
PORTLAND, MAINE.													
6	2.5	1.3	0.2	0.4	1.4	3.0	2.8	1.3	0.4	0.3	1.1	2.8	6
7	3.0	1.5	0.3	0.4	1.5	3.4	3.3	1.5	0.4	0.4	1.3	3.3	7
8	3.5	1.7	0.4	0.4	1.7	3.8	3.8	1.8	0.4	0.5	1.6	3.7	8
9	4.1	1.9	0.5	0.5	1.9	4.2	4.3	2.0	0.5	0.5	1.9	4.2	9
10	4.6	2.1	0.5	0.5	2.0	4.5	4.8	2.3	0.5	0.6	2.2	4.7	10
11	5.1	2.3	0.6	0.6	2.2	4.9	5.3	2.5	0.6	0.7	2.5	5.2	11
12	5.7	2.5	0.7	0.6	2.4	5.3	5.8	2.7	0.6	0.7	2.8	5.7	12
13	6.2	2.7	0.8	0.6	2.5	5.6	6.3	3.0	0.7	0.8	3.1	6.2	13
BOSTON, MASSACHUSETTS.													
6	2.9	1.6	0.4	0.5	1.6	2.8	3.3	1.9	0.6	0.5	1.6	2.7	6
7	3.4	1.9	0.5	0.6	1.9	3.3	3.8	2.2	0.7	0.7	1.9	3.2	7
8	3.9	2.1	0.5	0.7	2.1	3.7	4.3	2.6	0.9	0.8	2.2	3.7	8
9	4.4	2.4	0.6	0.7	2.3	4.1	4.9	2.9	1.0	1.0	2.5	4.2	9
10	4.9	2.6	0.6	0.8	2.6	4.5	5.4	3.3	1.1	1.1	2.8	4.7	10
11	5.3	2.8	0.7	0.9	2.8	4.9	5.9	3.6	1.2	1.3	3.1	5.2	11
12	5.8	3.0	0.7	0.9	3.1	5.3	6.4	3.9	1.4	1.4	3.4	5.7	12
13	6.3	3.3	0.8	1.0	3.3	5.7	6.9	4.3	1.5	1.6	3.7	6.1	13
NEWPORT, RHODE ISLAND.													
2	1.2	0.6	0.2	0.2	0.6	1.3	1.0	0.3	0.0	0.0	0.3	0.7	2
3	1.5	0.8	0.3	0.3	1.0	1.9	1.6	0.7	0.2	0.1	0.5	1.0	3
4	1.8	0.9	0.3	0.4	1.3	2.4	2.3	1.2	0.3	0.3	0.7	1.4	4
5	2.0	1.1	0.4	0.6	1.7	3.0	2.9	1.6	0.5	0.4	0.9	1.7	5
NEW LONDON, CONNECTICUT.													
2	1.0	0.5	0.2	0.2	0.6	0.9	0.9	0.6	0.2	0.2	0.6	1.0	2
3	1.2	0.6	0.2	0.3	0.8	1.3	1.4	0.8	0.3	0.2	0.9	1.6	3
4	1.4	0.8	0.3	0.4	1.0	1.7	1.8	1.0	0.4	0.3	1.1	2.2	4
WILLETS POINT, NEW YORK.													
5	2.9	0.8	0.0	0.0	1.0	2.5	2.0	0.6	0.1	0.1	1.2	3.0	5
6	3.2	1.0	0.1	0.1	1.1	2.8	2.3	0.8	0.2	0.2	1.5	3.5	6
7	3.5	1.1	0.1	0.1	1.2	3.2	2.6	1.0	0.3	0.3	1.8	4.0	7
8	3.8	1.2	0.1	0.2	1.3	3.5	2.8	1.1	0.4	0.3	2.1	4.5	8
9	4.1	1.3	0.2	0.3	1.4	3.9	3.0	1.3	0.5	0.4	2.4	5.0	9
NEW YORK, NEW YORK.													
3	1.4	0.7	0.1	0.3	0.8	1.6	1.6	0.8	0.1	0.1	0.6	1.6	3
4	1.9	0.9	0.2	0.3	1.0	2.0	1.7	0.9	0.2	0.4	1.3	2.5	4
5	2.3	1.0	0.3	0.4	1.1	2.4	1.9	1.0	0.3	0.5	1.9	3.4	5
6	2.7	1.2	0.4	0.5	1.3	2.8	2.0	1.0	0.4	0.8	2.6	4.2	6
SANDY HOOK, NEW JERSEY.													
3	1.2	0.6	0.2	0.4	1.0	1.7	1.3	0.7	0.3	0.3	0.8	1.7	3
4	1.7	0.9	0.2	0.4	1.2	2.1	1.7	0.9	0.3	0.3	1.2	2.2	4
5	2.2	1.1	0.3	0.4	1.4	2.5	2.0	1.1	0.3	0.4	1.5	2.8	5
6	2.7	1.4	0.4	0.5	1.6	3.0	2.3	1.2	0.3	0.5	1.9	3.3	6
7	3.2	1.6	0.4	0.5	1.8	3.3	2.6	1.3	0.3	0.5	2.2	3.7	7

For finding the height of the sea or tide at any intermediate hour between High and Low Water.

Range of Tide.	Subtract from height of High Water.						Add to height of Low Water.						Range of Tide.
	Hours before High Water.			Hours after High Water.			Hours before Low Water.			Hours after Low Water.			
	3	2	1	1	2	3	3	2	1	1	2	3	
Feet.	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*
PHILADELPHIA, PENNSYLVANIA.													
5	2.7	1.5	0.5	0.7	1.8	2.8	1.8	1.1	0.5	1.9	3.5	4.3	5
6	2.9	1.5	0.5	0.7	1.9	2.8	2.0	1.2	0.6	2.1	3.8	4.9	6
7	3.1	1.6	0.5	0.7	1.9	2.9	2.2	1.3	0.6	2.3	4.0	5.6	7
OLD POINT COMFORT, VIRGINIA.													
2	0.9	0.4	0.1	0.1	0.5	1.2	1.1	0.5	0.0	0.2	0.6	1.3	2
3	1.2	0.6	0.2	0.2	0.7	1.6	1.4	0.6	0.1	0.2	0.8	1.6	3
WASHINGTON, DISTRICT OF COLUMBIA.													
2	1.2	0.5	0.1	0.1	0.5	1.1	1.0	0.5	0.1	0.1	0.8	1.5	2
3	1.4	0.7	0.2	0.2	0.7	1.3	1.2	0.6	0.2	0.3	1.0	1.8	3
4	1.6	0.9	0.3	0.3	0.9	1.5	1.4	0.7	0.3	0.3	1.2	2.1	4
BALTIMORE, MARYLAND.													
1	0.5	0.3	0.1	0.1	0.3	0.5	0.5	0.3	0.1	0.1	0.3	0.5	1
2	0.7	0.4	0.1	0.1	0.4	0.7	0.8	0.4	0.1	0.1	0.4	0.8	2
WILMINGTON, NORTH CAROLINA.													
1	0.8	0.4	0.1	0.1	0.3	0.6	0.3	0.2	0.1	0.2	0.5	0.9	1
2	1.2	0.6	0.2	0.2	0.6	1.0	0.6	0.3	0.1	0.5	1.0	1.7	2
3	1.6	0.8	0.2	0.3	0.9	1.5	0.9	0.5	0.2	0.8	1.6	2.6	3
4	2.1	1.1	0.3	0.4	1.2	2.0	1.2	0.7	0.3	1.2	2.3	3.5	4
CHARLESTON, SOUTH CAROLINA.													
3	1.4	0.6	0.2	0.2	0.6	1.4	1.6	0.7	0.3	0.2	1.0	1.9	3
4	1.8	0.8	0.2	0.2	0.9	1.8	2.1	1.1	0.3	0.3	1.3	2.3	4
5	2.1	1.0	0.2	0.3	1.2	2.3	2.6	1.4	0.4	0.4	1.5	2.7	5
6	2.4	1.1	0.3	0.4	1.5	2.7	3.1	1.8	0.5	0.5	1.7	3.2	6
7	2.7	1.3	0.4	0.5	1.8	3.2	3.6	2.1	0.6	0.6	1.9	3.6	7
SAVANNAH ENTRANCE, GEORGIA.													
4	2.3	1.2	0.4	0.3	1.4	2.2	2.5	1.5	0.4	0.3	1.0	2.2	4
5	2.5	1.3	0.4	0.4	1.4	2.4	2.7	1.5	0.4	0.4	1.2	2.5	5
6	2.9	1.4	0.4	0.4	1.5	2.9	3.0	1.6	0.5	0.4	1.5	3.0	6
7	3.2	1.6	0.4	0.5	1.7	3.3	3.3	1.7	0.6	0.5	1.9	3.6	7
8	3.6	1.7	0.4	0.5	1.8	3.8	3.6	1.8	0.6	0.6	2.2	4.1	8
9	4.0	1.8	0.5	0.6	1.9	4.2	3.9	2.0	0.7	0.7	2.6	4.6	9
FERNANDINA, FLORIDA.													
4	2.0	1.1	0.3	0.4	1.2	2.1	1.8	0.9	0.2	0.3	1.0	1.9	4
5	2.4	1.3	0.4	0.4	1.4	2.6	2.2	1.2	0.3	0.4	1.3	2.4	5
6	2.8	1.5	0.4	0.5	1.7	3.1	2.6	1.4	0.4	0.5	1.6	3.0	6
7	3.2	1.6	0.5	0.5	2.0	3.6	3.0	1.7	0.5	0.5	1.9	3.5	7
8	3.4	1.7	0.5	0.6	2.2	3.9	3.3	1.9	0.5	0.6	2.1	3.8	8
KEY WEST, FLORIDA.													
1	0.4	0.1	0.1	0.1	0.2	0.5	0.5	0.2	0.1	0.1	0.1	0.4	1
2	0.7	0.2	0.1	0.1	0.4	0.9	0.9	0.3	0.1	0.1	0.2	0.9	2
3	1.0	0.3	0.1	0.2	0.6	1.3	1.2	0.4	0.2	0.2	0.4	1.4	3

For finding the height of the sea or tide at any intermediate hour between High and Low Water.

Range of Tide.	Subtract from height of High Water.						Add to height of Low Water.						Range of Tide.
	Hours before High Water.			Hours after High Water.			Hours before Low Water.			Hours after Low Water.			
	3	2	1	1	2	3	3	2	1	1	2	3	
Feet.	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*
GALVESTON, TEXAS.													
½	0.4	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.2	0.4	½
1	0.5	0.3	0.1	0.1	0.3	0.4	0.4	0.2	0.1	0.1	0.3	0.4	1
1½	0.6	0.3	0.1	0.1	0.3	0.5	0.5	0.3	0.1	0.1	0.3	0.5	1½
2	0.6	0.4	0.1	0.1	0.3	0.5	0.5	0.3	0.1	0.1	0.3	0.6	2

EXAMPLE ILLUSTRATING THE USE OF TABLE 2.

1. Required, the height of tide at Boston, Massachusetts, at 7 a. m., on a day when the nearest predicted tides are as follows:

Low water.		High water.	
Time.	Height.	Time.	Height.
5h 07m.	—0.6 ft.	11h 22m.	11.2 ft.

The given time, 7 a. m., is about 2 hours *after* low water, and the range of tide in this case is 11.8 feet. Entering Table 2 for Boston, 2 hours after low water, for the range 11.8 feet (interpolating between 11 and 12 feet), we find 3.3 feet, which, added to −0.6 foot, the height of low water, gives 2.7 feet as the height required.

2. Required, the height of tide at New York, New York, at 6:15 a. m., on a day when the nearest predicted tides are as follows:

High water.		Low water.	
Time.	Height.	Time.	Height.
8h 29m.	4.4 ft.	9h 51m.	0.1 ft.

The given time, 6:15 a. m., is about 2¼ hours *after* high water, and the range of tide in this case is 4.3 feet. Entering Table 2 for New York, 2¼ hours after high water, for the range 4.3 feet (interpolating between 2 and 3 hours and between 4 and 5 feet), we find 1.8 feet, which, subtracted from 4.4 feet, the height of high water, gives 2.6 feet as the height required.

3. Required, the height of the tide at Charleston, South Carolina, at 3:30 p. m., on a day when the nearest predicted tides are as follows:

Low water.		High water.	
Time.	Height.	Time.	Height.
11h 28m.	0.0.	17h 52m.	5.0 ft.

The given time, 3:30 p. m., is about 2¼ hours *before* high water, and the range of tide is 5.0 feet. Entering Table 2 for Charleston, 2¼ hours before high water, for the range 5.0 feet (interpolating between 2 and 3 hours), we find 1.3 feet, which, subtracted from 5.0 feet, the height of high water, gives 3.7 feet as the height required.

For extending the application of Table 2 B to the height of the tide at any time.

Duration of rise or fall, that is, the difference between the times of the tides on either side of the time for which the height is required.

h. m.	h. m. 2 30	h. m. 3 00	h. m. 3 30	h. m. 4 00	h. m. 4 30	h. m. 5 00	h. m. 5 30	h. m. 6 00	h. m. 7 00	h. m. 8 00	h. m. 9 00	h. m. 10 00	h. m. 11 00	h. m. 12 00	h. m. 13 00	h. m. 14 00	h. m. 15 00	h. m. 16 00	h. m. 17 00	h. m.

The tabular values are the top argument for entering Table 2 B.

Time before or after high or low water, that is, the difference between the time for which the height is required and the nearest high or low water.

0 05	0 12	0 10	0 09	0 08	0 07	0 06	0 06	0 05	0 04	0 04	0 03	0 03	0 03	0 03	0 02	0 02	0 02	0 02	0 02	0 05
0 10	0 25	0 21	0 18	0 16	0 14	0 12	0 11	0 10	0 09	0 08	0 07	0 06	0 06	0 05	0 05	0 04	0 04	0 04	0 04	0 10
0 15	0 37	0 31	0 27	0 23	0 21	0 19	0 17	0 16	0 13	0 12	0 10	0 09	0 08	0 08	0 07	0 07	0 06	0 06	0 05	0 15
0 20	0 50	0 41	0 35	0 31	0 28	0 25	0 22	0 21	0 18	0 16	0 14	0 12	0 11	0 10	0 10	0 09	0 08	0 08	0 07	0 20
0 25	1 02	0 52	0 44	0 39	0 35	0 31	0 28	0 26	0 22	0 19	0 17	0 16	0 14	0 13	0 12	0 11	0 10	0 10	0 09	0 25
0 30	1 15	1 02	0 53	0 47	0 41	0 37	0 34	0 31	0 27	0 23	0 21	0 19	0 17	0 16	0 14	0 13	0 12	0 12	0 11	0 30
0 35	1 27	1 12	1 02	0 54	0 48	0 43	0 39	0 36	0 31	0 27	0 24	0 22	0 20	0 18	0 17	0 16	0 14	0 14	0 13	0 35
0 40	1 39	1 23	1 11	1 02	0 55	0 50	0 45	0 41	0 35	0 31	0 28	0 25	0 23	0 21	0 19	0 18	0 17	0 16	0 15	0 40
0 45	1 52	1 33	1 20	1 10	1 02	0 56	0 51	0 47	0 40	0 35	0 31	0 28	0 25	0 23	0 21	0 20	0 19	0 17	0 16	0 45
0 50	2 04	1 44	1 29	1 18	1 09	1 02	0 56	0 52	0 44	0 39	0 35	0 31	0 28	0 26	0 24	0 22	0 21	0 19	0 18	0 50
0 55	2 17	1 54	1 38	1 25	1 16	1 08	1 02	0 57	0 49	0 43	0 38	0 34	0 31	0 28	0 26	0 24	0 23	0 21	0 20	0 55
1 00	2 29	2 04	1 46	1 33	1 23	1 15	1 07	1 02	0 53	0 47	0 41	0 37	0 34	0 31	0 29	0 27	0 25	0 23	0 22	1 00
1 05	2 41	2 15	1 55	1 41	1 30	1 21	1 13	1 07	0 58	0 50	0 45	0 40	0 37	0 34	0 31	0 29	0 27	0 25	0 24	1 05
1 10	2 54	2 25	2 04	1 49	1 37	1 27	1 19	1 12	1 02	0 54	0 48	0 43	0 40	0 36	0 33	0 31	0 29	0 27	0 26	1 10
1 15	3 06	2 35	2 13	1 56	1 44	1 33	1 24	1 18	1 07	0 58	0 52	0 47	0 42	0 39	0 36	0 33	0 31	0 29	0 27	1 15
1 20		2 46	2 22	2 04	1 50	1 39	1 30	1 23	1 11	1 02	0 55	0 50	0 45	0 41	0 38	0 35	0 33	0 31	0 29	1 20
1 25		2 56	2 31	2 12	1 57	1 46	1 35	1 28	1 15	1 06	0 59	0 53	0 48	0 44	0 41	0 38	0 35	0 33	0 31	1 25
1 30		3 06	2 40	2 20	2 04	1 52	1 41	1 33	1 20	1 10	1 02	0 56	0 51	0 47	0 43	0 40	0 37	0 35	0 33	1 30
1 35			2 49	2 27	2 11	1 58	1 47	1 38	1 24	1 14	1 06	0 59	0 54	0 49	0 45	0 42	0 39	0 37	0 35	1 35
1 40			2 57	2 35	2 18	2 04	1 52	1 44	1 29	1 18	1 09	1 02	0 56	0 52	0 48	0 44	0 41	0 39	0 37	1 40
1 45			3 06	2 43	2 25	2 10	1 58	1 49	1 33	1 22	1 12	1 05	0 59	0 54	0 50	0 47	0 43	0 41	0 38	1 45
1 50				2 51	2 32	2 17	2 04	1 54	1 38	1 25	1 16	1 08	1 02	0 57	0 53	0 49	0 46	0 43	0 40	1 50
1 55				2 59	2 39	2 23	2 09	1 59	1 42	1 29	1 19	1 11	1 05	1 00	0 55	0 51	0 48	0 45	0 42	1 55
2 00				3 06	2 46	2 29	2 15	2 04	1 46	1 33	1 23	1 15	1 08	1 02	0 57	0 53	0 50	0 47	0 44	2 00
2 05					2 53	2 35	2 20	2 09	1 51	1 37	1 26	1 18	1 11	1 05	1 00	0 55	0 52	0 49	0 46	2 05
2 10					3 00	2 41	2 26	2 15	1 55	1 41	1 30	1 21	1 13	1 07	1 02	0 58	0 54	0 50	0 47	2 10
2 15					3 06	2 48	2 32	2 20	2 00	1 45	1 33	1 24	1 16	1 10	1 04	1 00	0 56	0 52	0 49	2 15
2 20						2 54	2 37	2 25	2 04	1 49	1 37	1 27	1 19	1 12	1 07	1 02	0 58	0 54	0 51	2 20
2 25						3 00	2 43	2 30	2 09	1 53	1 40	1 30	1 22	1 15	1 09	1 04	1 00	0 56	0 53	2 25
2 30						3 06	2 48	2 35	2 13	1 56	1 44	1 33	1 25	1 18	1 12	1 07	1 02	0 58	0 55	2 30
2 35							2 54	2 40	2 18	2 00	1 47	1 36	1 28	1 20	1 14	1 09	1 04	1 00	0 57	2 35
2 40							3 00	2 46	2 22	2 04	1 50	1 39	1 30	1 23	1 16	1 11	1 06	1 02	0 58	2 40
2 45							3 06	2 51	2 26	2 08	1 54	1 42	1 33	1 25	1 19	1 13	1 08	1 04	1 00	2 45
2 50								2 56	2 31	2 12	1 57	1 46	1 36	1 28	1 21	1 15	1 10	1 06	1 02	2 50
2 55								3 01	2 35	2 16	2 01	1 49	1 39	1 31	1 24	1 18	1 12	1 08	1 04	2 55
3 00								3 06	2 40	2 20	2 04	1 52	1 42	1 33	1 26	1 20	1 15	1 10	1 06	3 00
3 10									2 49	2 27	2 11	1 58	1 47	1 38	1 31	1 24	1 19	1 14	1 09	3 10
3 20									2 57	2 35	2 18	2 04	1 53	1 44	1 36	1 29	1 23	1 18	1 13	3 20
3 30									3 06	2 43	2 25	2 10	1 59	1 49	1 40	1 33	1 27	1 22	1 17	3 30
3 40										2 51	2 32	2 17	2 04	1 54	1 45	1 38	1 31	1 25	1 20	3 40
3 50										2 59	2 39	2 23	2 10	1 59	1 50	1 42	1 35	1 29	1 24	3 50
4 00										3 06	2 46	2 29	2 15	2 04	1 55	1 46	1 39	1 33	1 28	4 00
4 10											2 53	2 35	2 21	2 09	1 59	1 51	1 44	1 37	1 31	4 10
4 20											2 59	2 41	2 27	2 15	2 04	1 55	1 48	1 41	1 35	4 20
4 30											3 06	2 48	2 32	2 20	2 09	2 00	1 52	1 45	1 39	4 30
4 40												2 54	2 38	2 25	2 14	2 04	1 56	1 49	1 42	4 40
4 50												3 00	2 44	2 30	2 19	2 09	2 00	1 53	1 46	4 50
5 00												3 06	2 49	2 35	2 23	2 13	2 04	1 56	1 50	5 00
5 10													2 55	2 40	2 28	2 18	2 08	2 00	1 53	5 10
5 20													3 01	2 46	2 33	2 22	2 12	2 04	1 57	5 20
5 30													3 06	2 51	2 38	2 26	2 17	2 08	2 01	5 30
5 40														2 56	2 42	2 31	2 21	2 12	2 04	5 40
5 50														3 01	2 47	2 35	2 25	2 16	2 08	5 50
6 00														3 06	2 52	2 40	2 29	2 20	2 12	6 00
6 10															2 57	2 44	2 33	2 24	2 15	6 10
6 20															3 02	2 49	2 37	2 27	2 19	6 20
6 30															3 06	2 53	2 41	2 31	2 22	6 30
6 40																2 57	2 46	2 35	2 26	6 40
6 50																3 02	2 50	2 39	2 30	6 50
7 00																3 06	2 54	2 43	2 33	7 00
7 10																	2 58	2 47	2 37	7 10
7 20																	3 02	2 51	2 41	7 20
7 30																	3 06	2 55	2 44	7 30
7 40																		2 59	2 48	7 40
7 50																		3 02	2 52	7 50
8 00																		3 06	2 55	8 00
8 10																			2 59	8 10
8 20																			3 03	8 20
8 30																			3 06	8 30

Time before or after high or low water, that is, the difference between the time for which the height is required and the nearest high or low water.

EXPLANATION OF TABLES 2 A AND 2 B.

If the range of tide is less than 10 feet, whenever the durations of rise and fall are not less than, say, 6 hours, nor greater than 6h. 25m., Table 2 B may be used directly. But, for greater ranges of tide, or when the durations of rise and fall exceed the above limits, it becomes desirable to use Table 2 A before entering Table 2 B. In order to illustrate the way of doing this, the following examples are given:

1. Required, the height of sea at 1h. 15m. p. m. for a station at which the nearest predicted tides are given as follows:

	High water.		Low water.	
	Time.	Height.	Time.	Height.
	10h. 27m	6.0 ft.	17h. 32m	—0.7 ft.

The duration of fall =17h. 32m.—10h. 27m.=7h. 05m.
The time after high water=13h. 15m.—10h. 27m.=2h. 48m.
The range of tide =6.0—(—0.7) =6.7 ft.
The height of high water =6.0 ft.
Table 2 A, arguments 7h. 05m., and 2h. 48m., gives 2h. 27m.
Table 2 B, arguments 2h. 27m., and 6.7 ft., gives 2.2 ft.
Required height of sea at 1h. 15m. p. m.=6.0—2.2=3.8 ft.

2. Required, the height of sea at 9h. 30m. a. m. for a station at which the tide is diurnal, the nearest predicted tides being as follows:

	Low water.		High water.	
	Time.	Height.	Time.	Height.
	4h. 28m	0.8 ft.	21h. 0.5m	2.9 ft

The duration of rise =21h. 05m.—4h. 28m.=16h. 37m.
The time after low water= 9h. 30m.—4h. 28m.= 5h. 02m.
The range of tide =2.9—0.8 =2.1 ft.
The height of low water =0.8 ft.
Table 2 A, arguments 16h. 37m. and 5h. 02m., gives 1h. 53m.
Table 2 B, arguments 1h. 53m. and 2.1 ft., gives 0.4 ft.
Required height of the sea at 9h. 30m. a. m.=0.8+0.4=1.2 ft.

The time is reckoned from 0 to 24 hours, from midnight to midnight. In the first example 1h. 15m. p. m. becomes 13h. 15m. for finding the time after high water.

Height of the surface of the sea reckoned from high or low water.

Time before or after high or low water,—that is, the difference between the time for which the height is required and the nearest high or low water.

Range of tide, or the difference between the heights of the high water and low water on either side of the time for which the height is required.	h. m. 0 10	h. m. 0 20	h. m. 0 30	h. m. 0 40	h. m. 0 50	h. m. 1 00	h. m. 1 10	h. m. 1 20	h. m. 1 30	h. m. 1 40	h. m. 1 50	h. m. 2 00	h. m. 2 10	h. m. 2 20	h. m. 2 30	h. m. 2 40	h. m. 2 50	h. m. 3 00	h. m. 3 10	Range of tide, or the difference between the heights of the high water and low water on either side of the time for which the height is required.
	Subtract the tabular values from the height of high water when the difference of time is reckoned from high water. Add the tabular values to the height of low water when the difference of time is reckoned from low water.																			
ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.5
1.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	1.0
1.5	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.8	1.5
2.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.8	0.9	0.9	1.0	2.0
2.5	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.1	1.1	1.2	1.3	2.5
3.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.3	1.4	1.5	3.0
3.5	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.2	1.4	1.5	1.7	1.8	3.5
4.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.4	0.6	0.7	0.8	0.9	1.1	1.2	1.4	1.6	1.7	1.9	2.1	4.0
4.5	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.1	1.2	1.4	1.6	1.8	1.9	2.1	2.3	4.5
5.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.7	0.8	1.0	1.2	1.4	1.5	1.7	1.9	2.2	2.4	2.6	5.0
5.5	0.0	0.0	0.1	0.2	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.4	2.6	2.8	5.5
6.0	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.7	0.8	1.0	1.2	1.4	1.6	1.9	2.1	2.3	2.6	2.8	3.1	6.0
6.5	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.7	0.9	1.1	1.3	1.5	1.8	2.0	2.3	2.5	2.8	3.1	3.4	6.5
7.0	0.0	0.0	0.1	0.2	0.3	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.9	2.2	2.4	2.7	3.0	3.3	3.6	7.0
7.5	0.0	0.1	0.1	0.2	0.3	0.5	0.6	0.8	1.0	1.3	1.5	1.8	2.0	2.3	2.6	2.9	3.2	3.6	3.9	7.5
8.0	0.0	0.1	0.1	0.2	0.4	0.5	0.7	0.9	1.1	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.5	3.8	4.1	8.0
8.5	0.0	0.1	0.1	0.2	0.4	0.5	0.7	0.9	1.2	1.4	1.7	2.0	2.3	2.6	3.0	3.3	3.7	4.0	4.4	8.5
9.0	0.0	0.1	0.1	0.2	0.4	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.4	2.8	3.1	3.5	3.9	4.3	4.6	9.0
9.5	0.0	0.1	0.2	0.3	0.4	0.6	0.8	1.0	1.3	1.6	1.9	2.2	2.6	2.9	3.3	3.7	4.1	4.5	4.9	9.5
10.0	0.0	0.1	0.2	0.3	0.4	0.6	0.8	1.1	1.4	1.7	2.0	2.3	2.7	3.1	3.5	3.9	4.3	4.7	5.2	10.0
10.5	0.0	0.1	0.2	0.3	0.5	0.7	0.9	1.2	1.4	1.8	2.1	2.5	2.9	3.3	3.7	4.1	4.5	5.0	5.4	10.5
11.0	0.0	0.1	0.2	0.3	0.5	0.7	0.9	1.2	1.5	1.8	2.2	2.6	3.0	3.4	3.8	4.3	4.7	5.2	5.7	11.0
11.5	0.0	0.1	0.2	0.3	0.5	0.7	1.0	1.3	1.6	1.9	2.3	2.7	3.1	3.6	4.0	4.5	5.0	5.4	5.9	11.5
12.0	0.0	0.1	0.2	0.3	0.5	0.7	1.0	1.3	1.7	2.0	2.4	2.8	3.3	3.7	4.2	4.7	5.2	5.7	6.2	12.0
12.5	0.0	0.1	0.2	0.3	0.5	0.8	1.1	1.4	1.7	2.1	2.5	2.9	3.4	3.9	4.4	4.9	5.4	5.9	6.4	12.5
13.0	0.0	0.1	0.2	0.4	0.6	0.8	1.1	1.4	1.8	2.2	2.6	3.1	3.5	4.0	4.5	5.1	5.6	6.2	6.7	13.0
13.5	0.0	0.1	0.2	0.4	0.6	0.8	1.1	1.5	1.8	2.3	2.7	3.2	3.7	4.2	4.7	5.3	5.8	6.4	7.0	13.5
14.0	0.0	0.1	0.2	0.4	0.6	0.9	1.2	1.5	1.9	2.3	2.8	3.3	3.8	4.3	4.9	5.5	6.0	6.6	7.2	14.0
14.5	0.0	0.1	0.2	0.4	0.6	0.9	1.2	1.6	2.0	2.4	2.9	3.4	3.9	4.5	5.1	5.7	6.3	6.9	7.5	14.5
15.0	0.0	0.1	0.2	0.4	0.7	0.9	1.3	1.6	2.1	2.5	3.0	3.5	4.1	4.6	5.2	5.8	6.5	7.1	7.7	15.0
15.5	0.0	0.1	0.2	0.4	0.7	1.0	1.3	1.7	2.1	2.6	3.1	3.6	4.2	4.8	5.4	6.0	6.7	7.3	8.0	15.5
16.0	0.0	0.1	0.3	0.5	0.7	1.0	1.4	1.8	2.2	2.7	3.2	3.8	4.3	5.0	5.6	6.2	6.9	7.6	8.2	16.0
16.5	0.0	0.1	0.3	0.5	0.7	1.0	1.4	1.8	2.3	2.8	3.3	3.9	4.5	5.1	5.8	6.4	7.1	7.8	8.5	16.5
17.0	0.0	0.1	0.3	0.5	0.7	1.1	1.4	1.9	2.3	2.8	3.4	4.0	4.6	5.3	5.9	6.6	7.3	8.0	8.8	17.0
17.5	0.0	0.1	0.3	0.5	0.8	1.1	1.5	1.9	2.4	2.9	3.5	4.1	4.8	5.4	6.1	6.8	7.6	8.3	9.0	17.5
18.0	0.0	0.1	0.3	0.5	0.8	1.1	1.5	2.0	2.5	3.0	3.6	4.2	4.9	5.6	6.3	7.0	7.8	8.5	9.3	18.0
18.5	0.0	0.1	0.3	0.5	0.8	1.2	1.6	2.0	2.5	3.1	3.7	4.3	5.0	5.7	6.5	7.2	8.0	8.8	9.5	18.5
19.0	0.0	0.1	0.3	0.5	0.8	1.2	1.6	2.1	2.6	3.2	3.8	4.5	5.2	5.9	6.6	7.4	8.2	9.0	9.8	19.0
19.5	0.0	0.1	0.3	0.5	0.9	1.2	1.7	2.1	2.7	3.3	3.9	4.6	5.3	6.0	6.8	7.6	8.4	9.2	10.1	19.5
20.0	0.0	0.1	0.3	0.6	0.9	1.3	1.7	2.2	2.7	3.3	4.0	4.7	5.4	6.2	7.0	7.8	8.6	9.5	10.3	20.0
20.5	0.0	0.1	0.3	0.6	0.9	1.3	1.7	2.2	2.8	3.4	4.1	4.8	5.6	6.3	7.2	8.0	8.8	9.7	10.6	20.5
21.0	0.0	0.1	0.3	0.6	0.9	1.3	1.8	2.3	2.9	3.5	4.2	4.9	5.7	6.5	7.3	8.2	9.1	9.9	10.8	21.0
21.5	0.0	0.2	0.3	0.6	0.9	1.3	1.8	2.4	2.9	3.6	4.3	5.0	5.8	6.7	7.5	8.4	9.3	10.2	11.1	21.5
22.0	0.0	0.2	0.4	0.6	1.0	1.4	1.9	2.4	3.0	3.7	4.4	5.2	6.0	6.8	7.7	8.6	9.5	10.4	11.3	22.0
22.5	0.0	0.2	0.4	0.6	1.0	1.4	1.9	2.5	3.1	3.8	4.5	5.3	6.1	7.0	7.9	8.8	9.7	10.7	11.6	22.5
23.0	0.0	0.2	0.4	0.6	1.0	1.4	2.0	2.5	3.2	3.9	4.6	5.4	6.2	7.1	8.0	9.0	9.9	10.9	11.9	23.0
23.5	0.0	0.2	0.4	0.7	1.0	1.5	2.0	2.6	3.2	3.9	4.7	5.5	6.4	7.3	8.2	9.2	10.1	11.1	12.1	23.5
24.0	0.0	0.2	0.4	0.7	1.1	1.5	2.0	2.6	3.3	4.0	4.8	5.6	6.5	7.4	8.4	9.4	10.4	11.4	12.4	24.0
24.5	0.0	0.2	0.4	0.7	1.1	1.5	2.1	2.7	3.4	4.1	4.9	5.8	6.7	7.6	8.6	9.6	10.6	11.6	12.6	24.5
25.0	0.0	0.2	0.4	0.7	1.1	1.6	2.1	2.7	3.4	4.2	5.0	5.9	6.8	7.7	8.7	9.7	10.8	11.8	12.9	25.0
25.5	0.0	0.2	0.4	0.7	1.1	1.6	2.2	2.8	3.5	4.3	5.1	6.0	6.9	7.9	8.9	9.9	11.0	12.1	13.1	25.5
26.0	0.0	0.2	0.4	0.7	1.1	1.6	2.2	2.9	3.6	4.4	5.2	6.1	7.1	8.0	9.1	10.1	11.2	12.3	13.4	26.0
26.5	0.0	0.2	0.4	0.7	1.2	1.7	2.2	2.9	3.6	4.4	5.3	6.2	7.2	8.2	9.3	10.3	11.4	12.5	13.7	26.5
27.0	0.0	0.2	0.4	0.8	1.2	1.7	2.3	3.0	3.7	4.5	5.4	6.3	7.3	8.4	9.4	10.5	11.6	12.8	13.9	27.0
27.5	0.0	0.2	0.4	0.8	1.2	1.7	2.3	3.0	3.8	4.6	5.5	6.5	7.5	8.5	9.6	10.7	11.9	13.0	14.2	27.5
28.0	0.0	0.2	0.4	0.8	1.2	1.8	2.4	3.1	3.8	4.7	5.6	6.6	7.6	8.7	9.8	10.9	12.1	13.3	14.4	28.0
28.5	0.1	0.2	0.5	0.8	1.3	1.8	2.4	3.1	3.9	4.8	5.7	6.7	7.7	8.8	10.0	11.1	12.3	13.5	14.7	28.5
29.0	0.1	0.2	0.5	0.8	1.3	1.8	2.4	3.2	4.0	4.9	5.8	6.8	7.9	9.0	10.1	11.3	12.5	13.7	15.0	29.0
29.5	0.1	0.2	0.5	0.8	1.3	1.9	2.5	3.2	4.0	4.9	5.9	6.9	8.0	9.1	10.3	11.5	12.7	14.0	15.2	29.5
30.0	0.1	0.2	0.5	0.8	1.3	1.9	2.5	3.3	4.1	5.0	6.0	7.0	8.1	9.3	10.5	11.7	12.9	14.2	15.5	30.0
30.5	0.1	0.2	0.5	0.9	1.3	1.9	2.6	3.3	4.2	5.1	6.1	7.2	8.3	9.4	10.7	11.9	13.2	14.4	15.7	30.5
31.0	0.1	0.2	0.5	0.9	1.4	1.9	2.6	3.4	4.3	5.2	6.2	7.3	8.4	9.6	10.8	12.1	13.4	14.7	16.0	31.0
31.5	0.1	0.2	0.5	0.9	1.4	2.0	2.7	3.5	4.3	5.3	6.3	7.4	8.6	9.8	11.0	12.3	13.6	14.9	16.2	31.5
32.0	0.1	0.2	0.5	0.9	1.4	2.0	2.7	3.5	4.4	5.4	6.4	7.5	8.7	9.9	11.2	12.5	13.8	15.1	16.5	32.0
32.5	0.1	0.2	0.5	0.9	1.4	2.0	2.8	3.6	4.5	5.4	6.5	7.6	8.8	10.1	11.4	12.7	14.0	15.4	16.8	32.5

The above table was computed for tides having periods of rise and fall each equal to one-quarter of a lunar day, or about $6^h\ 13^m$. Table 2 A has been made to extend the application of this table to nearly all kinds of tides, except river tides.

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (ARCTIC REGIONS).										
	ARCTIC ARCHIPELAGO.	*North.*	*West.*				*Local time.*		*Mean Low Water Springs.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Herschel Island	69 37	138 55	9 16	Madras	253	+ 9 02	+ 9 01	−0.5	−0.1	0.80
2	Bay of Mercy	74 10	118 20	7 53	Madras	253	− 8 21	− 7 32	−0.8	−0.2	0.67
3	Prince of Wales Strait	73 00	116 00	7 44	Madras	253	− 8 42	− 8 23	0.0	0.0	1.02
4	Winter Bay	74 50	111 00	7 24	Madras	253	− 6 57	− 6 58	+0.8	0.0	1.29
5	Bridport Inlet, Dealy Island	74 55	108 47	7 15	Charleston	113	+ 6 21	+ 6 19	−1.6	+0.4	0.60
6	Northumberland Sound	76 52	97 00	6 28	Melbourne	237	+10 24	+10 15	−0.2	0.0	0.82
7	Refuge Cove, Wellington Channel	75 31	92 10	6 09	Charleston	113	+ 4 07	+ 3 58	−0.1	+0.6	0.85
8	Griffiths Island, Barrow Strait	74 35	95 30	6 22	Madras	253	− 8 14	− 8 15	+0.8	0.0	1.29
9	Beechey Island, Barrow Strait	74 43	92 00	6 08	Charleston	113	+ 4 13	+ 4 06	−0.2	+0.6	0.83
10	Port Leopold, Barrow Strait	73 50	90 25	6 02	Charleston	113	+ 3 55	+ 3 47	−0.2	+0.6	0.83
11	Port Kennedy, Bellot Strait	72 01	94 15	6 17	Charleston	113	+ 3 27	+ 3 28	−1.6	+0.4	0.60
12	Fury and Hecla Strait	69 25	81 30	5 26	Charleston	113	− 0 55	− 1 04	+2.0	+0.9	1.19
	HUDSON BAY.										
13	Marble Island	62 41	91 10	6 05	Brest	285	+ 0 22	+ 0 15	−6.7	−0.9	0.61
14	Port Churchill	58 46	94 10	6 17	Brest	285	+ 3 18	+ 3 10	−8.6	−0.4	0.78
15	York Factory	57 02	92 32	6 10	Brest	285	+ 7 27	+ 7 20	−6.7	−0.9	0.61
16	Port Laperrière, Digges Island	62 34	78 01	5 12	Brest	285	+ 5 12	+ 5 02	−9.4	−1.2	0.45
	HUDSON STRAIT.										
17	Port Bouchervilie, Nottingham I.	63 12	77 28	5 10	Brest	285	+ 5 18	+ 5 09	−5.2	−0.8	0.70
18	Stupart Bay	61 35	71 32	4 46	Liverpool	313	− 3 10	− 3 43	−1.3	+0.2	0.90
19	Ashe Inlet	62 38	70 35	4 42	Liverpool	313	− 2 56	− 3 28	+3.3	+1.1	1.10
20	Koksoak River, Ungava Bay	58 34	68 12	4 33	Liverpool	313	− 2 18	− 2 50	+9.6	+2.0	1.36
21	Port Burwell, Ungava Bay	60 25	64 46	4 19	Sheerness	301	− 3 23	− 3 12	+2.2	+0.6	1.12
	CUMBERLAND SOUND.										
22	Kingua Fiord	66 36	67 20	4 29	Sheerness	301	+ 5 27	+ 5 38	+3.3	+0.9	1.21
	GREENLAND.										
	West coast.										
23	Frederiksdal	60 01	44 34	2 58	Charleston	113	− 4 55	− 5 04	+3.0	+1.2	1.33
24	Nennortalik	60 08	45 16	3 01	Charleston	113	− 2 17	− 2 28	+2.4	+1.2	1.21
25	Julianshaab	60 42	45 54	3 04	Charleston	113	− 2 54	− 3 05	+1.0	+1.0	0.98
26	Arsuk	61 12	48 27	3 14	Charleston	113	− 1 34	− 1 45	+5.3	+1.6	1.69
27	Frederickshaab	62 00	49 37	3 18	Charleston	113	− 1 37	− 1 48	+2.7	+1.2	1.27
28	Godthaab	64 12	51 44	3 27	Savannah Entr.	117	+ 0 02	− 0 05	+4.1	+1.4	1.41
29	Holsteinborg	67 00	53 42	3 35	Savannah Entr.	117	− 0 18	− 0 25	+2.0	+1.2	1.13
30	Whalefish Islands	68 50	53 15	3 33	Savannah Entr.	117	+ 1 27	+ 1 20	−0.2	+1.0	0.84
31	Godthavn, Disco Island	69 16	53 28	3 34	Savannah Entr.	117	+ 2 12	+ 2 05	−0.1	+0.9	0.86
32	Upernivik	72 50	56 05	3 44	Savannah Entr.	117	+ 4 13	+ 4 07	+0.1	+1.1	0.86
33	North Star Bay	76 30	68 50	4 35	Savannah Entr.	117	+ 4 22	+ 4 16	−0.3	+1.1	0.80
34	Wolstenholm Sound	76 33	68 56	4 36	Savannah Entr.	117	+ 4 24	+ 4 10	−0.2	+1.0	0.81
35	Port Foulke	78 18	73 00	4 52	Savannah Entr.	117	+ 4 39	+ 4 16	+1.8	+1.4	1.05
36	Rensselaer Bay	78 37	70 53	4 44	Savannah Entr.	117	+ 5 08	+ 4 54	+2.5	+1.5	1.16
37	Thank God Harbor, Polaris Bay	81 37	61 44	4 07	Charleston	113	+ 4 27	+ 4 12	−0.4	+0.8	0.75
	GRINNELL LAND.										
38	Cape Lawrence	81 21	69 15	4 37	Savannah Entr.	117	+ 4 33	+ 4 31	+5.0	+2.0	1.47
39	Fort Conger, Discovery Harbor	81 44	64 44	4 19	Charleston	113	+ 3 47	+ 3 34	0.0	+0.8	0.83
40	Cape Sheridan	82 25	61 30	4 06	Madras	253	+ 2 11	+ 2 05	−0.4	0.0	0.84
	JAN MAYEN.										
41	Mary Muss Bay	71 00	8 28	0 34	Halifax	57	+ 3 27	+ 3 06	−1.6	0.0	0.65
	ICELAND.										
42	Reikiavik	64 12	21 50	1 27	Sheerness	301	+ 5 02	+ 5 15	−2.2	−0.2	0.85
	GREENLAND.										
	East coast.										
43	Cape Borgen	75 25	18 02	1 12	Halifax	57	+ 4 02	+ 3 42	−2.0	0.0	0.56
44	Cape Philip Broke	74 55	17 35	1 10	Halifax	57	+ 3 16	+ 2 52	−1.5	0.0	0.68
45	Pendulum Island	74 40	18 30	1 14	Nagasaki	185	+ 3 17	+ 3 13	−1.2	−0.3	0.86
46	Jackson Island	73 55	20 00	1 20	Nagasaki	185	+ 3 02	+ 2 58	−0.2	−0.2	1.00
47	Cape Hold-with-Hope (Broer Ruys)	73 28	20 30	1 22	Nagasaki	185	+ 2 47	+ 2 43	−0.5	−0.2	0.95
48	Nubarbik	63 25	42 00	2 48	Madras	253	+10 18	+10 15	+1.6	+0.2	1.60
49	Cape Farewell	59 45	43 56	2 56	Savannah Entr.	117	− 2 39	− 2 45	−0.2	+1.0	0.82

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*East.* °
1	4 50	11 05	5 17*a*	12 08*b*	1.8	2.3	1.2	2.9	1.6	0.9	.....	1.8	1.2	1.3	42.0
2	12 20	7 00	12 51*a*	8 11*a*	1.5	2.0	1.0	2.5	1.5	0.8	.....	1.7	1.0	1.2	90.0
3	12 00	6 10	12 25*a*	7 07*a*	2.3	3.0	1.5	3.5	1.8	1.0	.....	2.1	1.5	1.6	87.0
4	1 20	7 40	1 41*b*	8 30*a*	2.9	3.8	1.9	4.3	2.0	1.1	.....	2.3	1.9	1.9	120.0
5	1 38	8 00	1 59*b*	8 49*a*	3.1	4.0	2.0	4.5	2.1	1.1	.....	2.4	2.0	2.1	132.0 E.
6	12 20	6 10	12 51*a*	7 22*a*	1.4	1.8	0.9	2.4	1.4	0.8	.....	1.6	0.9	1.1	158.0 W.
7	11 50	5 40	12 08*a*	6 22*a*	4.4	5.7	2.8	6.1	2.5	1.4	.....	2.9	2.8	2.8	139.0 W.
8	0 05	6 20	0 26*b*	7 10*a*	2.9	3.8	1.9	4.3	2.0	1.1	.....	2.3	1.9	1.9	148.0 W.
															West.
9	11 56	5 48	12 14*a*	6 29*a*	4.3	5.6	2.8	6.0	2.5	1.4	13 51	2.8	2.8	2.8	137.0
10	11 38	5 29	11 50*a*	4 58*a*	4.3	5.5	2.9	5.8	2.6	1.0	13 00	2.7	2.8	2.5	127.0
11	11 10	5 00	11 24*a*	4 18*a*	3.1	4.0	2.1	4.4	2.2	0.8	.....	2.3	2.0	1.9	130.0
12	6 50	0 40	7 00*a*	0 10*a*	6.2	8.0	4.2	8.0	3.1	1.1	.....	3.3	4.0	3.6	81.5
															East.
13	4 00	10 15	3 59*a*	10 18*a*	8.9	12.0	5.1	8.3	0.4	0.2	.....	0.4	6.0	4.2	7.5 W.
14	6 56	0 45	6 55*a*	0 47*b*	11.5	15.5	6.6	10.9	0.4	0.2	.....	0.4	7.8	4.5	5.0 E.
15	11 05	4 55	11 04*a*	4 58*b*	8.9	12.0	5.1	8.3	0.4	0.2	.....	0.4	6.0	4.2	3.0 E.
16	8 52	2 39	8 50*a*	2 43*b*	6.6	9.0	3.8	6.2	0.3	0.2	6 30	0.4	4.5	3.1	43.0 W.
															West.
17	8 58	2 46	8 52*a*	2 47*b*	10.2	13.5	6.1	9.8	0.3	0.9	3 42	1.0	6.8	5.0	48.0
18	7 50	1 37	7 45*a*	1 40*b*	19.2	25.1	12.3	18.7	0.8	1.4	3 44	1.6	12.6	9.5	47.5
19	8 04	1 52	8 01*a*	1 58*b*	23.5	31.2	14.4	22.3	0.6	1.4	3 12	1.5	15.6	11.3	51.0
20	8 42	2 30	8 39*a*	2 31*b*	28.9	38.5	17.6	28.6	0.6	1.5	.....	1.7	19.2	14.4	42.0
21	9 04	2 52	9 05*a*	2 46*b*	15.1	19.7	9.8	14.6	1.4	0.2	9 16	1.4	9.8	7.1	48.0
22	5 29	11 42	5 23*a*	11 49*a*	15.9	21.0	9.8	16.1	1.8	1.5	2 42	2.3	10.5	8.0	60.0
23	2 55	9 10	2 59*a*	8 50*b*	6.9	9.4	3.8	7.4	2.1	0.5	.....	2.1	4.7	3.3	44.5
24	5 33	11 46	5 38*a*	11 25*b*	6.3	8.6	3.4	6.7	2.0	0.5	6 26	2.0	4.3	3.0	45.0
25	4 56	11 09	5 01*a*	10 46*b*	5.1	7.0	2.8	5.5	1.8	0.4	.....	1.8	3.5	2.5	45.5
26	6 15	0 03	6 19*a*	− 0 15*a*	8.8	12.0	4.8	9.3	2.3	0.6	.....	2.4	6.0	4.3	47.0
27	6 12	0 00	6 16*a*	− 0 20*a*	6.6	9.0	3.6	7.1	2.0	0.5	.....	2.0	4.5	3.2	48.0
28	6 40	0 27	6 41*a*	0 13*a*	9.5	12.5	6.0	9.9	2.0	0.4	7 07	2.0	6.2	4.5	51.5
29	6 20	0 07	6 22*a*	− 0 09*a*	7.6	10.0	4.8	7.9	1.8	0.3	.....	1.8	5.0	3.6	56.5
30	8 05	1 52	8 07*a*	1 34*a*	5.7	7.5	3.6	6.0	1.6	0.3	.....	1.6	3.8	2.6	57.0
31	8 50	2 37	8 52*a*	2 19*a*	5.8	7.6	3.7	6.0	1.6	0.3	.....	1.6	3.8	2.6	57.5
32	10 50	4 38	10 56*a*	4 31*a*	5.8	8.0	3.0	6.0	0.7	0.6	.....	0.8	4.0	2.8	61.0
33	10 58	4 46	11 05*a*	4 37*a*	5.4	7.5	2.9	5.6	0.6	0.6	.....	0.9	3.8	2.6	70.0
34	11 00	4 40	11 07*a*	4 32*a*	5.5	7.6	2.9	5.6	0.6	0.6	.....	0.9	3.8	2.6	70.0
35	11 14	4 45	11 20*a*	4 38*a*	7.1	9.9	3.7	7.4	0.7	0.7	.....	1.0	5.0	3.4	80.0
36	11 43	5 23	11 49*a*	5 16*a*	7.8	10.8	4.1	8.0	0.8	0.7	.....	1.0	5.4	3.9	75.0
37	12 14	5 58	12 22*a*	5 49*a*	3.9	5.4	2.0	3.8	0.5	0.5	.....	0.7	2.7	2.0	66.0
38	11 09	5 01	11 14*a*	4 55*a*	9.9	13.8	5.1	10.1	0.9	0.8	.....	1.2	6.9	4.8	75.0
39	11 34	5 20	11 42*a*	5 11*a*	4.3	5.9	2.2	4.1	0.6	0.5	14 24	0.8	3.0	2.1	67.0
40	10 35	4 20	10 46*a*	4 06*a*	1.9	2.6	1.0	1.8	0.4	0.3	.....	0.5	1.3	0.9	66.0
41	11 21	5 07	11 35*b*	5 07*b*	2.8	3.7	1.9	2.9	0.1	0.6	5 00	0.6	1.8	1.6	26.5
42	5 10	11 25	5 13*a*	11 24*a*	11.5	14.5	8.4	12.6	0.4	1.2	.....	1.3	7.2	6.3	33.5
43	11 55	5 43	12 01*d*	5 41*a*	2.4	3.1	1.8	3.0	0.2	0.6	.....	0.6	1.6	1.5	35.0
44	11 10	4 58	11 15*a*	4 56*a*	2.9	3.7	2.1	3.5	0.2	0.6	.....	0.6	1.8	1.8	35.0
45	11 05	4 53	11 08*a*	4 52*a*	5.3	6.7	3.9	6.2	0.3	0.8	.....	0.8	3.4	3.2	35.0
46	10 50	4 38	10 53*a*	4 37*a*	6.2	7.9	4.5	7.2	0.3	0.9	.....	0.9	4.0	3.7	36.0
47	10 35	4 23	10 38*a*	4 22*a*	5.9	7.5	4.3	6.9	0.3	0.9	.....	0.9	3.8	3.6	36.0
48	6 20	0 08	6 26*a*	− 0 19*a*	3.6	4.9	2.0	3.9	1.5	0.4	.....	1.5	2.4	1.7	46.5
49	4 00	10 13	4 05*a*	9 50*b*	5.5	7.5	3.0	5.9	1.8	0.5	.....	1.9	3.8	2.6	44.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST).								*Mean Low Water Springs.*		
	LABRADOR.	*North.*	*West.*				*Local time.*				
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Eclipse Harbor	59 50	64 10	4 17	Charleston	113	+0 13	+0 02	−0.8	+0.6	0.71
2	Nachvak Bay	59 05	63 20	4 13	Charleston	113	−0 47	−0 58	−0.6	+0.7	0.73
3	Nain	56 34	61 44	4 07	Sandy Hook	89	−0 33	−0 37	+0.9	+0.8	1.04
4	Hopedale Harbor	55 25	60 20	4 01	Sandy Hook	89	−2 03	−2 07	+1.2	+0.8	1.11
5	Indian Harbor	54 30	57 30	3 50	Sandy Hook	89	−1 23	−1 27	+1.4	+0.8	1.13
6	Independent Harbor	53 51	56 55	3 48	Sandy Hook	89	−0 53	−0 57	+0.4	+0.7	0.94
7	Indian Tickle	53 34	56 00	3 44	Sandy Hook	89	−1 06	−1 10	+0.6	+0.7	0.98
8	Seal Islands	53 14	55 42	3 43	Sandy Hook	89	−1 03	−1 07	+0.2	+0.7	0.89
9	Venison Tickle	52 58	55 46	3 43	Sandy Hook	89	−0 56	−1 00	+0.2	+0.7	0.89
10	Occasional Harbor	52 40	55 47	3 43	Sandy Hook	89	−0 55	−0 59	−0.4	+0.6	0.81
11	Fishing Ship Harbor	52 36	55 45	3 43	Sandy Hook	89	−0 49	−0 53	+0.2	+0.7	0.89
12	Spear Harbor	52 26	55 38	3 43	St. Johns	53	+0 23	+0 21	+0.9	+0.1	1.31
13	St. Lewis Sound	52 19	55 44	3 43	St. Johns	53	−0 19	−0 21	+0.2	0.0	1.04
14	Chateau Bay, Strait of Belle Isle	52 00	55 53	3 44	Halifax	57	−0 35	−1 12	−2.0	0.0	0.56
15	Red Bay, Strait of Belle Isle	51 45	56 26	3 46	Halifax	57	+0 57	+0 10	−2.0	0.0	0.56
16	Forteau Bay, Strait of Belle Isle	51 27	56 28	3 46	Halifax	57	+1 57	+1 09	−1.2	0.0	0.73
	NEWFOUNDLAND.										
	East coast.						*Time meridian, 60° W.*				
17	Pistolet Bay	51 32	55 45	3 43	St. Johns	53	+0 23	+0 21	−0.2	0.0	0.96
18	Hare Bay	51 17	55 55	3 44	Sandy Hook	89	+0 39	+0 35	+1.6	+0.8	1.13
19	Canada Bay	50 45	56 08	3 45	Sandy Hook	89	−1 02	−1 16	0.0	+0.6	0.85
20	Cat Head, White Bay	50 08	56 41	3 47	St. Johns	53	−0 11	−0 13	+1.0	+0.2	1.35
21	Fortune Harbor, Notre Dame Bay	49 32	55 15	3 41	St. Johns	53	−0 04	−0 06	+0.6	0.0	1.23
22	Fogo Harbor	49 44	54 16	3 37	St. Johns	53	−0 07	−0 09	+0.9	+0.1	1.31
23	Barrow Harbor, Bonavista Bay	48 40	53 36	3 34	St. Johns	53	−1 12	−1 14	+0.8	+0.2	1.27
24	Hearts Content, Trinity Bay	47 53	53 23	3 34	St. Johns	53	+0 06	+0 06	+0.6	0.0	1.19
25	Grace Harbor, Conception Bay	47 42	53 13	3 33	St. Johns	53	−0 01	−0 03	+0.9	+0.1	1.31
26	ST. JOHNS	47 34	52 42	3 31	St. Johns	53	0 00	0 00	0.0	0.0	1.00
	South coast.										
27	Cape Race	46 39	53 07	3 32	Sandy Hook	89	−1 12	−1 16	+1.0	+0.8	1.04
28	Trepassey Harbor	46 43	53 33	3 34	Sandy Hook	89	−1 10	−1 14	+1.2	+0.8	1.06
29	St. Mary Harbor, St. Mary Bay	46 55	53 35	3 34	Sandy Hook	89	−0 30	−0 34	+2.0	+1.0	1.21
30	Cape St. Mary, Placentia Bay	46 50	54 12	3 37	Sandy Hook	89	+0 23	+0 19	+1.7	+0.9	1.15
31	Woody Island, Placentia Bay	47 47	54 13	3 37	Sandy Hook	89	+0 03	−0 01	+1.6	+0.8	1.13
32	Burin Harbor, Placentia Bay	47 02	55 11	3 41	Sandy Hook	89	+0 43	+0 39	+1.0	+0.8	1.04
33	Great Laun	46 56	55 33	3 42	Sandy Hook	89	+0 14	+0 10	+1.6	+0.8	1.13
34	Miquelon or St. Pierre Island	46 47	56 09	3 45	Sandy Hook	89	+0 35	+0 31	+1.2	+0.8	1.06
35	Brunet Islands	47 16	55 55	3 44	Sandy Hook	89	+1 04	+1 00	+1.0	+0.8	1.04
36	Grand Bank Harbor, Fortune Bay	47 06	55 44	3 43	Sandy Hook	89	+0 48	+0 44	+0.8	+0.8	1.00
37	Grand le Pierre H., Fortune Bay	47 09	54 46	3 39	Sandy Hook	89	+1 05	+1 01	+1.4	+0.8	1.11
38	Breton Harbor, Fortune Bay	47 30	55 47	3 43	Sandy Hook	89	+0 52	+0 48	+1.7	+0.9	1.15
39	Hermitage Cove	47 32	55 55	3 44	Sandy Hook	89	+0 46	+0 42	+1.6	+0.8	1.13
40	Rencontre Bay	47 37	56 37	3 46	Sandy Hook	89	+0 58	+0 54	+1.0	+0.8	1.02
41	La Hune Bay	47 33	56 50	3 47	Sandy Hook	89	+0 44	+0 40	+1.0	+0.8	1.04
42	Burgeo Islands	47 36	57 37	3 50	Sandy Hook	89	+0 39	+0 35	+0.8	+0.8	1.00
43	La Poile Bay	47 40	58 23	3 54	Sandy Hook	89	+1 11	+1 07	+0.7	+0.7	0.98
44	Port Basque	47 35	59 07	3 56	Sandy Hook	89	+1 15	+1 11	+0.3	+0.7	0.89
	West coast.										
	Gulf of St. Lawrence.										
45	Codroy Road	47 53	59 24	3 58	Halifax	57	+0 59	+0 29	−0.9	+0.1	0.77
46	St. George Harbor	48 28	58 21	3 53	Halifax	57	+1 09	+0 37	−1.2	0.0	0.70
47	Frenchman Cove, Bay of Islands	49 00	58 09	3 53	Halifax	57	+1 22	+0 46	−0.8	0.0	0.82
48	Bonne Bay	49 34	57 57	3 52	Halifax	57	+1 33	+0 57	−0.6	0.0	0.84
49	Cowhead Harbor	49 55	57 47	3 51	Halifax	57	+1 42	+1 03	−0.4	0.0	0.89
50	Hawke Harbor	50 37	57 12	3 49	Halifax	57	+1 55	+1 12	−0.5	+0.1	0.87
51	Port au Choix	50 44	57 21	3 49	Halifax	57	+1 50	+1 08	+1.0	+0.2	1.17
52	Good Bay	50 48	57 12	3 49	Halifax	57	+1 56	+1 13	+0.8	+0.3	1.15
53	Castors Harbor, St. John Bay	50 54	56 57	3 48	Halifax	57	+2 00	+1 15	−1.2	0.0	0.75
54	St. Genevieve Bay	51 09	56 48	3 47	Halifax	57	+2 08	+1 21	−0.2	0.0	0.94
	QUEBEC.										
	Gulf of St. Lawrence.										
55	Belles Amour Bay	51 27	57 26	3 50	Halifax	57	+0 47	−0 01	−1.6	0.0	0.66
56	Mistanoque Harbor	51 16	58 12	3 53	Halifax	57	+2 20	+1 25	−0.5	+0.1	0.87
57	Antrobus Island	50 33	59 17	3 57	Halifax	57	+2 24	+1 21	−1.2	0.0	0.73
58	Wapitagun Harbor	50 12	60 01	4 00	Halifax	57	+2 28	+0 26	−1.2	0.0	0.73

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	8 00	1 48	8 06*a*	1 21*b*	3.7	5.0	2.0	4.0	1.5	0.4	.....	1.5	2.5	1.7	47.5
2	7 00	0 48	7 06*a*	0 21*b*	3.8	5.2	2.1	4.1	1.5	0.4	.....	1.6	2.6	1.8	45.0
3	7 00	0 48	6 57*a*	1 07*b*	4.9	6.5	3.0	5.4	1.3	0.3	.....	1.4	3.2	2.3	41.0
4	5 30	11 43	5 27*a*	12 01*a*	5.2	6.9	3.2	5.7	1.4	0.3	.....	1.4	3.4	2.6	39.0
5	6 10	12 28	6 07*a*	12 40*a*	5.3	7.0	3.2	5.8	1.5	0.3	.....	1.4	3.5	2.7	38.5
6	6 40	0 28	6 36*a*	0 48*b*	4.4	5.8	2.7	4.9	1.3	0.3	.....	1.3	2.9	2.2	38.0
7	6 27	0 15	6 24*a*	0 33*b*	4.6	6.0	2.8	5.1	1.3	0.3	.....	1.3	3.0	2.3	37.0
8	6 30	0 18	6 26*a*	0 38*b*	4.2	5.5	2.6	4.7	1.3	0.3	.....	1.3	2.8	2.1	37.0
9	6 37	0 25	6 33*a*	0 45*b*	4.2	5.5	2.6	4.7	1.3	0.3	.....	1.3	2.8	2.1	36.5
10	6 38	0 26	6 34*a*	0 47*b*	3.8	5.0	2.3	4.3	1.2	0.3	.....	1.2	2.5	1.9	36.0
11	6 44	0 32	6 40*a*	0 52*b*	4.2	5.5	2.6	4.7	1.3	0.3	.....	1.3	2.8	2.1	36.0
12	7 12	1 00	7 08*a*	1 21*b*	3.4	4.5	2.0	3.8	1.1	0.2	.....	1.1	2.2	1.7	36.0
13	6 30	0 18	6 26*a*	0 42*b*	2.7	3.5	1.6	3.1	1.0	0.2	.....	1.0	1.8	1.4	35.5
14	7 30	1 05	6 57*a*	1 09*b*	2.4	3.1	1.6	2.9	0.2	1.2	.....	1.2	1.6	1.7	35.0
15	9 00	2 25	8 27*a*	2 29*b*	2.4	3.1	1.6	2.9	0.2	1.2	.....	1.2	1.6	1.7	34.0
16	10 00	3 24	9 30*a*	3 28*b*	3.1	4.0	2.0	3.7	0.2	1.4	.....	1.4	2.0	2.2	34.0
17	7 29	1 17	7 24*a*	1 43*b*	2.5	3.3	1.5	2.9	1.0	0.2	.....	1.0	1.6	1.3	34.0
18	8 28	2 16	8 25*a*	2 33*b*	5.3	7.0	3.2	5.8	1.4	0.3	.....	1.4	3.5	2.7	33.5
19	6 36	0 24	6 32*a*	0 44*b*	4.0	5.2	2.4	4.4	1.2	0.3	.....	1.2	2.6	2.0	32.5
20	6 50	0 38	6 46*a*	1 00*b*	3.5	4.6	2.1	3.9	1.1	0.2	.....	1.2	2.3	1.8	31.5
21	7 04	0 52	7 00*a*	1 14*b*	3.2	4.0	1.9	3.6	1.1	0.2	.....	1.1	2.0	1.6	31.0
22	7 05	0 53	7 01*a*	1 14*b*	3.4	4.5	2.1	3.8	1.1	0.2	.....	1.1	2.2	1.7	32.0
23	6 08	12 16	5 59*a*	12 37*a*	3.3	4.4	2.0	3.7	1.1	0.2	.....	1.1	2.2	1.7	31.0
24	7 23	1 11	7 19*a*	1 34*b*	3.1	4.1	1.9	3.4	1.1	0.2	.....	1.1	2.0	1.6	30.0
25	7 15	1 03	7 11*a*	1 24*b*	3.4	4.5	2.1	3.8	1.1	0.2	.....	1.1	2.2	1.7	29.5
26	7 12	1 01	7 07*a*	1 26*b*	2.5	3.3	1.5	2.9	1.0	0.2	6 20	1.0	1.6	1.3	29.5
27	6 50	0 38	6 47*a*	0 57*b*	4.9	6.5	3.0	5.4	1.3	0.3	.....	1.4	3.2	2.5	28.5
28	6 50	0 38	6 47*a*	0 56*b*	5.0	6.6	3.1	5.5	1.4	0.3	.....	1.4	3.3	2.5	28.5
29	7 30	1 18	7 27*a*	1 34*b*	5.7	7.5	3.5	6.3	1.5	0.3	.....	1.4	3.8	2.9	28.5
30	8 20	2 08	8 17*a*	2 25*b*	5.4	7.2	3.3	5.9	1.4	0.3	.....	1.4	3.6	2.7	28.5
31	8 00	1 48	7 57*a*	2 05*b*	5.3	7.0	3.2	5.8	1.4	0.3	.....	1.4	3.5	2.7	29.0
32	8 35	2 23	8 32*a*	2 42*b*	4.9	6.5	3.0	5.4	1.3	0.3	.....	1.4	3.2	2.5	28.0
33	8 05	1 53	8 02*a*	2 11*b*	5.3	7.0	3.2	5.8	1.4	0.3	.....	1.4	3.5	2.7	27.5
34	8 23	2 11	8 20*a*	2 29*b*	5.0	6.6	3.1	5.5	1.4	0.3	.....	1.4	3.3	2.5	27.0
35	8 53	2 41	8 50*a*	3 00*b*	4.9	6.5	3.0	5.4	1.3	0.3	.....	1.4	3.2	2.5	28.0
36	8 38	2 26	8 35*a*	2 44*b*	4.7	6.2	2.9	5.2	1.3	0.3	.....	1.3	3.1	2.4	28.0
37	9 00	2 48	8 57*a*	3 06*b*	5.2	6.9	3.2	5.7	1.4	0.3	.....	1.4	3.4	2.6	28.5
38	8 42	2 30	8 39*a*	2 47*b*	5.4	7.1	3.3	5.9	1.4	0.3	.....	1.4	3.6	2.7	28.5
39	8 35	2 23	8 32*a*	2 40*b*	5.3	7.0	3.2	5.8	1.4	0.3	.....	1.4	3.5	2.7	28.5
40	8 45	2 33	8 41*a*	2 53*b*	4.8	6.3	2.9	5.3	1.3	0.3	.....	1.4	3.2	2.4	28.0
41	8 30	2 18	8 27*a*	2 37*b*	4.9	6.4	3.0	5.4	1.3	0.3	.....	1.4	3.2	2.5	28.0
42	8 22	2 10	8 19*a*	2 28*b*	4.7	6.2	2.9	5.2	1.3	0.3	.....	1.3	3.1	2.4	27.5
43	8 50	2 38	8 47*a*	2 56*b*	4.6	6.0	2.8	5.1	1.3	0.3	.....	1.3	3.0	2.3	27.0
44	8 52	2 40	8 48*a*	3 00*b*	4.2	5.5	2.6	4.7	1.3	0.3	.....	1.3	2.8	2.1	26.5
45	8 50	2 32	8 22*a*	2 36*b*	3.3	4.3	2.1	3.9	0.2	1.4	.....	1.4	2.2	2.2	27.0
46	9 05	2 45	8 37*a*	2 49*b*	3.0	3.9	1.9	3.5	0.2	1.3	.....	1.3	2.0	2.0	28.0
47	9 20	2 58	8 54*a*	3 01*b*	3.5	4.5	2.3	4.1	0.2	1.4	.....	1.4	2.2	2.3	29.5
48	9 30	3 06	9 04*a*	3 09*b*	3.6	4.6	2.3	4.1	0.2	1.5	.....	1.5	2.3	2.4	30.5
49	9 40	3 13	9 14*a*	3 16*b*	3.8	4.9	2.5	4.4	0.2	1.5	.....	1.5	2.4	2.5	31.0
50	9 55	3 24	9 28*a*	3 28*b*	3.7	4.8	2.4	4.3	0.3	1.5	.....	1.5	2.4	2.4	32.0
51	9 50	3 20	9 28*a*	3 23*b*	5.0	6.5	3.2	5.7	0.3	1.7	.....	1.7	3.2	3.2	32.0
52	9 56	3 25	9 33*a*	3 28*b*	4.9	6.4	3.2	5.6	0.3	1.7	.....	1.7	3.2	3.2	32.0
53	10 00	3 27	9 31*a*	3 31*b*	3.2	4.1	2.1	3.8	0.3	1.4	.....	1.4	2.0	2.2	32.5
54	10 10	3 35	9 45*a*	3 38*b*	4.0	5.2	2.6	4.6	0.3	1.5	.....	1.5	2.6	2.6	33.0
55	8 45	2 10	8 15*a*	2 14*b*	2.8	3.6	1.8	3.3	0.6	1.3	.....	1.3	1.8	1.9	33.5
56	10 15	3 38	9 48*a*	3 37*b*	3.7	4.8	2.4	4.3	0.7	1.0	.....	1.5	2.4	2.4	33.0
57	10 15	3 25	9 45*a*	3 29*b*	3.1	4.0	2.0	3.7	1.0	1.0	.....	1.3	2.0	2.1	31.0
58	10 15	2 26	9 45*a*	2 30*b*	3.1	4.0	2.0	3.7	1.0	0.8	.....	1.3	2.0	2.1	30.0

Number.	Station.	Geographic position. Latitude.	Longitude. Arc.	Longitude. Time.	Standard port for reference. Name.	Page.	Tidal differences. Time. HW.	Time. LW.	Height. HW.	Height. LW.	Ratio of ranges.
	NORTH AMERICA (EAST COAST)—Continued.										
	QUEBEC—continued.										
	Gulf of St. Lawrence—Continued.	*North.*	*West.*				*Time meridian, 60° W.*		*Mean Low Water Springs.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Kegashka Bay	50 11	61 16	4 05	Halifax	57	+ 2 48	+ 1 08	− 1.2	0.0	0.73
2	Little Natashquan Harbor	50 12	61 50	4 07	Halifax	57	+ 3 05	+ 1 47	− 1.2	0.0	0.73
3	Appeetetat Bay	50 19	63 00	4 12	Halifax	57	+ 3 20	+ 2 03	− 1.2	0.0	0.73
4	Mingan Harbor	50 17	64 02	4 16	Halifax	57	+ 5 56	+ 4 38	− 0.5	+0.1	0.87
	Anticosti Island.										
5	West Point Light	49 52	64 32	4 18	Halifax	57	+ 6 41	+ 5 18	− 0.5	+0.1	0.87
6	Bear Bay	49 31	62 26	4 10	Halifax	57	+ 4 58	+ 3 35	− 1.2	0.0	0.73
7	East Point	49 08	61 39	4 07	Halifax	57	+ 3 25	+ 2 02	− 1.6	0.0	0.66
8	Southwest Point Light	49 24	63 36	4 14	Halifax	57	+ 6 04	+ 5 29	+ 0.7	+0.1	1.15
	St. Lawrence River.										
9	Cape Rosier Light	48 52	64 12	4 17	New York	85	+ 6 07	+ 4 55	+ 0.8	+0.4	1.11
10	Cape Magdalen Light	49 16	65 19	4 21	New York	85	+ 6 19	+ 5 09	+ 1.6	+0.4	1.27
11	Martin River Light	49 13	66 09	4 25	New York	85	+ 6 27	+ 5 30	+ 2.4	+0.4	1.45
12	Carousel Light	50 06	66 23	4 26	New York	85	+ 6 34	+ 5 29	+ 3.2	+0.4	1.61
13	Cawee Island	49 50	67 07	4 28	New York	85	+ 6 38	+ 5 36	+ 4.0	+0.6	1.80
14	Cape Chatte Light	49 06	66 45	4 27	New York	85	+ 6 46	+ 6 20	+ 7.5	+1.1	2.45
							Time meridian, 75° W.				
15	Point de Monts Light	49 20	67 22	4 29	New York	85	+ 5 46	+ 5 22	+ 6.6	+1.0	2.26
16	Matane Light	48 52	67 33	4 30	New York	85	+ 5 49	+ 5 25	+ 6.0	+0.6	2.20
17	Little Metis	48 41	68 01	4 32	New York	85	+ 5 51	+ 5 27	+ 7.5	+1.1	2.45
18	Manicouagan Shoal Light	49 06	68 12	4 33	New York	85	+ 5 54	+ 5 06	+ 6.9	+0.7	2.41
19	Father Point Light	48 31	68 28	4 34	New York	85	+ 5 54	+ 5 30	+ 8.4	+1.2	2.64
20	Bic Island	48 24	68 53	4 36	New York	85	+ 5 59	+ 5 38	+ 8.8	+0.8	2.80
21	Tadousac, Saguenay River	48 09	69 43	4 39	New York	85	+ 6 26	+ 6 06	+11.6	+1.0	3.40
22	Chicoutimi, Saguenay River	48 34	71 05	4 44	New York	85	+ 6 43	+ 7 42	+ 6.9	+0.7	2.41
23	Brandy Pots Light	47 52	69 41	4 39	New York	85	+ 6 40	+ 6 19	+11.6	+1.0	3.40
24	Murray Bay	47 39	70 08	4 41	New York	85	+ 7 22	+ 7 10	+11.2	+1.4	3.21
25	Orignaux Point Light	47 30	70 02	4 40	New York	85	+ 7 29	+ 7 18	+12.1	+1.1	3.50
26	Coudres Island	47 21	70 26	4 42	New York	85	+ 7 58	+ 7 50	+11.6	+1.6	3.30
27	L'Islet	47 08	70 22	4 41	New York	85	+ 8 59	+ 8 55	+12.6	+1.0	3.61
28	Beaujeu Channel	47 05	70 29	4 42	New York	85	+ 9 19	+ 9 16	+12.5	+1.5	3.49
29	Grosse Isle	47 02	70 40	4 43	New York	85	+ 9 17	+ 9 41	+13.5	+1.1	3.82
30	Berthier	46 56	70 43	4 43	New York	85	+ 9 34	+10 00	+11.6	+1.6	3.30
31	St. Laurent Light, Orleans Island	46 52	71 03	4 44	New York	85	+ 9 58	+10 36	+12.2	+1.0	3.52
32	Quebec Dry Dock	46 49	71 12	4 45	New York	85	+10 14	+11 00	+ 9.6	+0.8	2.98
33	St. Nicholas	46 42	71 24	4 46	New York	85	+10 49	+11 35	+11.2	+1.4	3.21
34	St. Augustin	46 45	71 28	4 46	New York	85	+11 00	+11 52	+10.6	+1.4	3.11
35	Ste. Croix	46 37	71 45	4 47	New York	85	+11 45	+13 00	+ 9.4	+1.2	2.83
36	Point Platon	46 40	71 51	4 47	New York	85	+11 55	+13 11	+ 8.8	+1.2	2.74
37	Grondine Light	46 36	72 04	4 48	New York	85	−12 16	−10 31	+ 8.7	+0.5	1.73
38	Cape Roche Light	46 33	72 10	4 49	New York	85	−11 52	−10 00	+ 1.2	+0.4	1.21
39	Batiscan Light	46 31	72 15	4 49	New York	85	−10 55	− 8 59	− 1.4	+0.2	0.64
40	Champlain Light	46 26	72 21	4 49	New York	85	−10 24	− 8 17	− 2.1	+0.1	0.51
41	Three Rivers	46 20	72 33	4 50	New York	85	− 9 51	− 7 35	− 3.2	0.0	0.25
	Gulf of St. Lawrence.						*Time meridian, 60° W.*				
42	O'Hara Point Light, Gaspé Bay	48 50	64 32	4 18	Halifax	57	+ 7 05	+ 5 48	− 0.2	0.0	0.96
43	Cape Despair Light	48 26	64 18	4 17	Halifax	57	+ 6 24	+ 5 17	− 0.8	0.0	0.82
44	Maquereau Point, Chaleur Bay	48 12	64 46	4 19	Halifax	57	+ 6 51	+ 5 52	− 0.6	+0.2	0.84
45	Carlisle, Chaleur Bay	48 01	65 20	4 21	Halifax	57	+ 7 18	+ 6 28	− 0.5	+0.1	0.87
46	Carleton Point, Chaleur Bay	48 05	66 07	4 24	Halifax	57	+ 7 30	+ 6 47	+ 2.6	+0.2	1.54
	NEW BRUNSWICK.										
	Gulf of St. Lawrence.										
47	Campbellton, Chaleur Bay	48 01	66 40	4 27	Halifax	57	+ 8 33	+ 8 01	+ 4.4	+0.4	1.92
48	Dalhousie, Chaleur Bay	48 04	66 21	4 25	Halifax	57	+ 7 41	+ 6 57	+ 3.4	+0.4	1.73
49	Bathurst, Chaleur Bay	47 39	65 37	4 22	Halifax	57	+ 7 29	+ 7 17	+ 0.9	+0.3	1.15
50	Caraquette, Chaleur Bay	47 50	64 54	4 20	Halifax	57	+ 7 12	+ 7 00	0.0	+0.2	0.98
51	Miscou Harbor, Chaleur Bay	47 55	64 29	4 18	Halifax	57	+ 6 55	+ 6 43	− 1.2	0.0	0.73
52	North Tracadio Gully Light	47 30	64 52	4 19	Halifax	57	+ 8 11	+ 8 14	− 2.6	−0.2	0.45
53	Lower Neguac, Miramichi Bay	47 16	65 03	4 20	Halifax	57	+ 9 48	+ 9 54	− 2.6	−0.2	0.42
54	Richibucto Head Light	46 40	64 42	4 19	Halifax	57	− 1 39	− 1 31	− 2.2	−0.2	0.51
55	Shediac Island Light	46 15	64 32	4 18	Halifax	57	0 00	+ 0 08	− 2.2	−0.2	0.51
56	Jourimain Islet Light	46 10	63 48	4 15	Halifax	57	+ 1 32	+ 1 40	− 1.0	0.0	0.75
57	Cape Tormentine	46 07	63 46	4 15	Halifax	57	+ 2 37	+ 2 16	− 1.1	−0.1	0.77

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	West. °
1	10 30	3 03	10 00*a*	3 07*b*	3.1	4.0	2.0	3.7	1.2	0.5	.....	1.3	2.0	1.7	29.0
2	10 45	3 40	10 15*a*	3 44*b*	3.1	4.0	2.0	3.7	1.2	0.5	.....	1.3	2.0	1.7	29.0
3	10 55	3 51	10 25*a*	3 55*b*	3.1	4.0	2.0	3.7	1.2	0.5	.....	1.3	2.0	1.7	28.5
4	1 01	6 22	0 34*b*	6 26*b*	3.7	4.8	2.4	4.3	1.4	0.5	.....	1.5	2.4	2.0	27.5
5	1 45	7 00	1 18*b*	7 04*b*	3.7	4.8	2.4	4.3	1.1	0.5	.....	1.5	2.4	2.0	27.0
6	0 10	5 25	12 05*a*	5 29*b*	3.1	4.0	2.0	3.7	1.1	0.5	.....	1.3	2.0	1.7	27.5
7	11 05	3 55	10 35*a*	3 59*b*	2.8	3.6	1.8	3.3	1.1	0.5	.....	1.3	1.8	1.6	27.5
8	1 12	7 15	0 46*b*	7 18*b*	4.9	6.0	3.7	5.4	1.2	0.6	.....	1.5	3.0	2.8	27.0
9	1 25	6 40	1 21*b*	7 03*b*	4.9	5.5	4.1	5.3	1.6	0.8	.....	1.8	2.8	2.4	25.5
10	1 33	6 50	1 27*b*	7 15*b*	5.6	6.4	4.7	6.0	1.8	0.8	.....	2.0	3.2	2.8	25.5
11	1 37	5 57	1 32*b*	7 20*b*	6.4	7.3	5.4	6.8	1.9	0.9	.....	2.1	3.6	3.2	25.0
12	1 43	7 05	1 38*b*	7 27*b*	7.1	8.1	6.0	7.6	2.0	0.9	.....	2.2	4.0	3.5	26.0
13	1 45	7 10	1 40*b*	7 31*b*	7.9	9.0	6.6	8.4	2.0	1.0	.....	2.3	4.5	3.9	25.0
14	1 55	7 56	1 55*b*	8 13*b*	10.8	13.0	8.3	12.0	2.0	1.2	.....	2.5	6.5	6.0	24.5
15	1 53	7 56	1 49*b*	8 13*b*	9.9	12.0	7.7	11.2	2.6	1.1	.....	2.6	6.0	5.5	24.5
16	1 55	7 58	1 51*b*	8 16*b*	9.7	11.0	8.1	10.3	2.6	1.1	.....	2.6	5.5	4.8	23.5
17	1 55	7 58	1 51*b*	8 15*b*	10.8	13.0	8.3	12.2	2.7	1.1	.....	2.7	6.5	6.0	23.0
18	1 57	7 36	1 53*b*	7 53*b*	10.6	12.0	8.9	11.2	2.8	1.1	.....	2.7	6.0	5.2	23.5
19	1 56	7 59	1 52*b*	8 15*b*	11.6	14.0	9.0	13.0	2.8	1.1	.....	2.7	7.0	6.4	22.5
20	1 59	8 05	1 55*b*	8 21*b*	12.3	14.0	10.3	12.9	3.0	1.2	.....	2.9	7.0	6.1	22.0
21	2 23	8 30	2 20*b*	8 45*b*	15.0	17.0	12.6	15.7	3.3	1.3	.....	3.2	8.5	7.4	21.5
22	2 34	10 00	2 30*b*	10 17*b*	10.6	12.0	8.9	11.2	2.8	1.1	.....	2.7	6.0	5.1	20.0
23	2 37	8 43	2 34*b*	8 58*b*	15.0	17.0	12.6	15.7	3.3	1.3	.....	3.2	8.5	7.4	21.0
24	3 17	9 32	3 14*b*	9 47*b*	14.1	17.0	10.9	15.8	3.3	1.3	.....	3.2	8.5	7.7	20.5
25	3 25	9 41	3 22*b*	9 56*b*	15.4	17.5	12.9	16.1	3.3	1.4	.....	3.3	8.8	7.6	20.5
26	3 51	10 10	3 48*b*	10 25*b*	14.5	17.5	11.2	16.2	3.3	1.4	.....	3.3	8.8	8.0	20.0
27	4 54	11 17	4 51*b*	11 31*b*	15.9	18.0	13.3	16.6	3.4	1.4	.....	3.3	9.0	7.9	19.5
28	5 12	11 36	5 09*b*	11 50*b*	15.4	18.5	11.9	17.1	3.4	1.4	.....	3.3	9.2	8.4	19.5
29	5 09	12 00	5 06*b*	12 14*b*	16.8	19.0	14.1	17.5	3.5	1.4	.....	3.4	9.5	8.3	18.5
30	5 26	12 19	5 23*b*	0 08*a*	14.5	17.5	11.2	16.2	3.3	1.4	.....	3.4	8.8	8.0	18.5
31	5 49	0 29	5 46*b*	0 44*a*	15.5	17.6	13.0	16.2	3.4	1.4	.....	3.3	8.8	7.7	18.5
32	6 04	0 52	6 02*b*	1 06*a*	13.1	14.9	10.9	13.6	3.0	1.3	17 43	3.0	7.4	6.4	17.5
33	6 38	1 26	6 35*b*	1 42*a*	14.1	17.0	10.9	15.7	3.2	1.3	.....	2.8	8.5	7.7	17.5
34	6 49	1 43	6 45*b*	2 00*a*	13.7	16.5	10.6	15.3	3.1	1.2	.....	2.8	8.2	7.4	17.5
35	7 33	2 50	7 29*b*	3 08*a*	12.5	15.0	9.6	14.0	3.0	1.2	.....	2.6	7.5	6.8	17.0
36	7 43	3 01	7 38*b*	3 21*a*	12.1	14.5	9.3	13.6	3.0	1.1	.....	2.4	7.2	6.6	17.0
37	8 21	4 06	8 16*b*	4 29*a*	7.6	8.6	6.4	8.1	2.4	1.0	.....	2.3	4.3	3.7	16.5
38	8 44	4 38	8 38*b*	5 03*a*	5.3	6.0	4.4	5.7	2.0	0.8	.....	1.9	3.0	2.6	16.5
39	9 41	5 39	9 35*b*	6 06*a*	2.8	3.2	2.3	3.1	1.4	0.6	.....	1.4	1.6	1.4	16.5
40	10 12	6 21	10 03*b*	7 01*a*	2.2	2.5	1.8	2.5	1.3	0.5	.....	1.2	1.2	1.1	16.5
41	10 44	7 02	10 32*b*	7 55*a*	1.1	1.3	0.9	1.3	0.9	0.4	.....	0.9	0.6	0.5	16.0
42	2 09	7 30	1 40*b*	7 34*b*	4.1	5.0	3.1	4.7	1.4	0.3	.....	1.4	2.5	2.2	25.5
43	1 29	7 00	1 03*b*	7 03*b*	3.5	4.5	2.3	4.1	1.4	0.3	.....	1.4	2.2	2.0	25.0
44	1 54	7 33	1 26*b*	7 37*b*	3.6	4.7	2.3	4.2	1.5	0.3	.....	1.5	2.4	2.0	24.0
45	2 19	8 07	1 52*b*	8 11*b*	3.7	4.8	2.4	4.3	1.5	0.3	.....	1.5	2.4	2.1	24.0
46	2 28	8 23	2 05*b*	8 26*b*	6.6	8.0	4.9	7.3	1.7	0.3	.....	1.7	4.0	3.4	23.5
47	3 28	9 34	3 09*b*	9 37*b*	8.3	10.0	6.1	9.1	2.0	0.3	.....	2.0	5.0	4.3	23.0
48	2 38	8 32	2 18*b*	8 35*b*	7.4	9.0	5.5	8.2	1.9	0.3	.....	1.9	4.5	3.8	23.0
49	2 29	8 55	2 06*b*	8 58*b*	4.9	6.3	3.2	5.6	1.7	0.3	.....	1.7	3.2	2.6	23.0
50	2 14	8 40	1 49*b*	8 43*b*	4.2	5.4	2.7	4.8	1.6	0.3	.....	1.6	2.7	2.2	23.0
51	1 59	8 25	1 29*b*	8 29*b*	3.1	4.0	2.0	3.7	1.3	0.3	.....	1.3	2.0	1.7	24.0
52	3 14	9 55	2 37*b*	10 00*b*	1.9	2.4	1.2	2.2	1.1	0.4	.....	1.1	1.2	1.1	24.0
53	4 50	11 34	4 13*b*	11 39*b*	1.8	2.3	1.2	2.2	0.9	0.5	.....	1.0	1.2	1.1	23.5
54	5 50	0 10	5 17*b*	0 14*a*	2.2	2.8	1.4	2.7	0.9	0.6	.....	1.1	1.4	1.3	23.0
55	7 30	1 50	6 57*b*	1 54*a*	2.2	2.8	1.4	2.7	0.9	0.9	.....	1.1	1.4	1.4	22.5
56	9 05	3 25	8 36*b*	3 29*a*	3.2	4.2	2.1	3.8	0.6	1.0	.....	1.4	2.1	2.0	23.0
57	10 09	4 01	9 41*b*	4 05*a*	3.3	4.0	2.5	4.0	0.6	1.4	.....	1.4	2.0	2.1	23.0

Number.	Station.	Geographic position. Latitude.	Longitude. Arc.	Longitude. Time.	Standard port for reference. Name.	Page.	Tidal differences. Time. HW.	Time. LW.	Height. HW.	Height. LW.	Ratio of ranges.
	NORTH AMERICA (EAST COAST)—Continued.										
	PRINCE EDWARD ISLAND.										
	Gulf of St. Lawrence—Continued.	*North.*	*West.*				*Time meridian, 60° W.*		*Mean Low Water Springs.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	North Point Light	47 04	63 59	4 16	Halifax	57	+ 9 13	+ 9 16	−2.6	−0.2	0.45
2	Alberton	46 48	64 03	4 16	Halifax	57	+10 36	+10 39	−2.6	−0.2	0.42
3	Richmond Harbor	46 34	63 45	4 15	Halifax	57	+10 43	+10 46	−3.2	−0.2	0.33
4	Grand Rustico Light	46 28	63 17	4 13	Halifax	57	+10 38	+10 41	−3.4	−0.2	0.28
5	St. Peters Harbor Light	46 26	62 45	4 11	Halifax	57	+10 59	+11 02	−3.6	−0.4	0.23
6	East Point Light	46 27	61 58	4 08	Halifax	57	+ 0 37	+ 0 28	−3.5	−0.3	0.26
7	Souris	46 20	62 17	4 09	Halifax	57	+ 0 57	+ 0 18	−1.9	−0.1	0.59
8	Georgetown Harbor Light	46 10	62 31	4 10	Halifax	57	+ 1 22	+ 0 50	−2.1	0.0	0.54
9	Cape Bear Light	46 01	62 27	4 10	Halifax	57	+ 1 17	+ 0 38	−1.0	0.0	0.75
10	Charlottetown	46 12	63 07	4 12	Halifax	57	+ 2 46	+ 2 21	+0.9	+0.3	1.15
11	Hillsboro River Head	46 23	62 49	4 11	Halifax	57	+ 3 45	+ 2 47	+3.2	+0.6	1.62
12	Crapaud Light	46 13	63 29	4 14	Halifax	57	+ 2 06	+ 2 14	+0.9	+0.3	1.15
13	Summerside, Bedeque Bay	46 24	63 47	4 15	Halifax	57	+ 3 04	+ 2 48	+0.2	+0.2	1.01
14	Minimegash Light	46 53	64 14	4 17	Halifax	57	+ 9 54	+10 02	−2.6	−0.2	0.45
	ISLANDS.										
	Gulf of St. Lawrence.										
15	St. Paul Island, Northeast Light	47 14	60 06	4 01	Halifax	57	+ 0 44	+ 0 13	−2.3	−0.1	0.49
16	Magdalen Islands, Grindstone I'd.	47 23	61 57	4 08	Halifax	57	+ 1 05	+ 0 33	−2.6	−0.2	0.42
	NOVA SCOTIA.										
	Gulf of St. Lawrence.										
17	Pugwash Harbor Light	45 52	63 40	4 15	Halifax	57	+ 2 50	+ 2 18	0.0	+0.2	0.98
18	Tatamagouche Harbor	45 45	63 10	4 13	Halifax	57	+ 2 18	+ 1 46	+0.6	+0.2	1.08
19	Pictou Harbor Light	45 41	62 40	4 11	Halifax	57	+ 2 14	+ 1 33	−1.2	0.0	0.70
20	Cape George Light	45 53	61 55	4 08	Halifax	57	+ 1 29	+ 0 57	−2.2	−0.2	0.51
21	Pomquet Harbor	45 39	61 55	4 08	Halifax	57	+ 1 45	+ 1 18	−2.0	0.0	0.56
	CAPE BRETON ISLAND.										
	Gulf of St. Lawrence.										
22	Gut of Canso, North Entrance	45 42	61 32	4 06	Halifax	57	+ 1 44	+ 1 16	−2.0	0.0	0.56
23	Port Hood Light	46 00	61 32	4 06	Halifax	57	+ 1 12	+ 0 42	−1.6	0.0	0.63
24	Chetican Island Light	46 38	61 00	4 04	Halifax	57	+ 1 06	+ 0 36	−2.3	0.0	0.49
25	Cape North	47 02	60 23	4 02	Halifax	57	+ 0 49	+ 0 19	−2.0	0.0	0.56
	Outer coast.										
26	Neal Harbor	46 49	60 20	4 01	Halifax	57	+ 0 25	+ 0 25	−0.7	−0.1	0.87
27	St. Anne Harbor Light	46 17	60 32	4 02	Halifax	57	+ 0 39	+ 0 39	+0.7	+0.1	1.15
28	Sydney Harbor Light	46 13	60 13	4 01	Halifax	57	+ 0 20	+ 0 20	−0.2	0.0	0.96
29	Menadou Bay	45 59	59 48	3 59	Halifax	57	+ 0 10	+ 0 10	+0.3	+0.1	1.05
30	Louisburg Harbor Light	45 55	59 57	4 00	Halifax	57	− 0 03	− 0 03	−0.2	0.0	0.96
31	St. Peter Bay Light	45 41	60 50	4 03	Halifax	57	− 0 30	− 0 30	+0.7	+0.1	1.15
32	Arichat Harbor Light	45 30	61 08	4 04	Halifax	57	+ 0 11	+ 0 11	−0.2	0.0	0.96
	NOVA SCOTIA.										
	Outer coast.										
33	Gut of Canso, South Entrance	45 31	61 15	4 05	Halifax	57	+ 0 22	+ 0 22	+0.4	0.0	1.08
34	Guysboro Light	45 23	61 29	4 06	Halifax	57	+ 0 23	+ 0 23	+1.0	+0.2	1.22
35	Canso Harbor Light	45 21	60 59	4 04	Halifax	57	− 0 01	− 0 01	+1.1	+0.1	1.24
36	Whitehaven	45 12	61 08	4 05	Halifax	57	+ 0 02	+ 0 02	+1.2	+0.2	1.27
37	Country Harbor, Island Harbor	45 10	61 41	4 07	Halifax	57	− 0 16	− 0 16	+1.1	+0.1	1.24
38	Liscomb Harbor Light	44 59	61 58	4 08	Halifax	57	+ 0 05	+ 0 05	+1.1	+0.1	1.24
39	Sheet Harbor	44 53	62 31	4 10	Halifax	57	+ 0 13	+ 0 13	+1.2	0.0	1.25
40	Ship Harbor	44 46	62 48	4 11	Halifax	57	+ 0 02	+ 0 02	+1.1	+0.1	1.24
41	Jedore Harbor	44 42	63 01	4 12	Halifax	57	− 0 06	− 0 06	+1.0	+0.2	1.22
42	HALIFAX	44 40	63 35	4 14	Halifax	57	0 00	0 00	0.0	0.0	1.00
43	Sable Island, north side	43 57	59 55	4 00	Halifax	57	− 0 33	− 0 33	−1.1	−0.1	0.77
44	Sable Island, south side	43 55	60 00	4 00	Halifax	57	− 1 33	− 1 33	−1.0	−0.2	0.80
45	Blind Bay	44 28	63 50	4 15	Halifax	57	− 0 03	− 0 03	+2.1	+0.3	1.43
46	St. Margaret Bay	44 35	63 58	4 16	Halifax	57	0 00	0 00	+1.8	+0.2	1.36
47	Mahone Bay	44 28	64 17	4 17	Halifax	57	− 0 01	− 0 01	+2.1	+0.3	1.43
48	Lunenburg	44 23	64 18	4 17	Halifax	57	+ 0 08	+ 0 08	+1.6	+0.3	1.33
49	Port Medway	44 08	64 35	4 18	Halifax	57	+ 0 01	+ 0 01	+2.4	+0.4	1.50
50	Liverpool Bay	44 02	64 42	4 19	Halifax	57	+ 0 06	+ 0 06	+2.5	+0.3	1.52
51	Port Mouton	43 56	64 49	4 19	Halifax	57	+ 0 20	+ 0 20	+2.1	+0.3	1.43
52	Port Ebert	43 48	64 56	4 20	Halifax	57	+ 0 18	+ 0 18	+2.4	+0.2	1.50

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	4 19	11 00	3 42*b*	11 05*b*	1.9	2.4	1.2	2.2	0.9	0.4	.....	1.1	1.2	1.2	24.0
2	5 42	12 23	5 05*b*	0 03*a*	1.9	2.4	1.2	2.2	0.8	0.4	.....	1.1	1.2	1.2	24.0
3	5 50	0 06	5 08*b*	0 12*a*	1.4	1.8	0.9	1.8	0.6	0.5	.....	0.9	0.9	1.0	23.5
4	5 47	0 03	5 08*b*	0 09*a*	1.2	1.6	0.8	1.5	0.6	0.6	.....	0.8	0.8	0.9	24.0
5	6 10	0 26	5 17*b*	0 32*a*	1.0	1.3	0.6	1.3	0.6	0.6	.....	0.8	0.6	0.8	24.0
6	8 16	2 20	7 28*b*	2 26*a*	1.1	1.4	0.7	1.4	0.2	0.8	.....	0.8	0.7	1.0	24.5
7	8 35	2 09	8 03*b*	2 13*a*	2.5	3.2	1.6	3.0	0.2	1.2	.....	1.2	1.6	1.7	24.0
8	8 59	2 40	8 25*b*	2 45*a*	2.3	3.0	1.5	2.8	0.3	1.2	.....	1.2	1.5	1.6	24.0
9	8 54	2 23	8 25*b*	2 27*a*	3.2	4.2	2.1	3.8	0.4	1.4	.....	1.4	2.1	2.2	23.5
10	10 21	4 09	9 58*b*	4 12*a*	4.9	6.4	3.2	5.5	0.8	1.4	.....	1.7	3.2	3.0	23.0
11	11 21	4 36	11 02*b*	4 39*a*	6.9	9.0	4.5	7.7	1.4	1.6	.....	2.0	4.5	4.0	24.0
12	9 39	4 00	9 16*b*	4 03*a*	4.9	6.4	3.2	5.6	1.4	1.4	.....	1.7	3.2	2.9	23.0
13	10 36	4 33	10 12*b*	1 36*a*	4.3	5.6	2.8	4.9	1.4	0.5	.....	1.6	2.8	2.8	23.5
14	5 00	11 45	4 23*b*	11 50*b*	1.9	2.4	1.2	2.2	1.0	0.5	.....	1.1	1.2	1.1	24.0
15	8 30	2 12	7 55*b*	2 16*a*	2.1	2.7	1.4	2.6	0.1	1.1	15 04	1.1	1.4	1.5	26.0
16	8 45	2 25	8 06*b*	2 30*a*	1.8	2.3	1.2	2.2	0.1	1.0	.....	1.0	1.2	1.3	25.0
17	10 22	4 08	9 57*b*	4 06*a*	4.2	5.4	2.7	4.8	0.5	1.5	.....	1.6	2.7	2.8	22.5
18	9 52	3 33	9 29*b*	3 36*a*	4.6	6.0	3.0	5.2	0.3	1.5	.....	1.6	3.0	3.0	22.5
19	9 50	3 22	9 22*b*	3 26*a*	3.0	3.9	2.0	3.5	0.3	1.3	.....	1.3	2.0	2.0	22.5
20	9 08	2 49	8 35*b*	2 53*a*	2.2	2.8	1.4	2.7	0.2	1.1	.....	1.1	1.4	1.6	23.5
21	9 25	3 09	8 52*b*	3 13*a*	2.4	3.1	1.6	2.9	0.2	1.2	.....	1.2	1.6	1.7	23.5
22	9 26	3 10	8 53*b*	3 14*a*	2.4	3.1	1.6	2.9	0.2	1.2	.....	1.2	1.6	1.7	24.0
23	8 53	2 36	8 21*b*	2 40*a*	2.7	3.5	1.8	3.2	0.2	1.3	.....	1.3	1.8	1.9	24.0
24	8 50	2 32	8 16*b*	2 37*a*	2.1	2.7	1.4	2.6	0.2	1.1	.....	1.1	1.4	1.5	25.0
25	8 35	2 17	8 02*b*	2 21*a*	2.4	3.1	1.6	2.9	0.2	1.2	.....	1.2	1.6	1.7	25.5
26	8 11	2 24	7 46*a*	2 29*b*	3.7	4.5	2.8	4.1	0.5	1.0	.....	1.1	2.2	2.8	25.5
27	8 25	2 37	8 14*a*	2 43*b*	4.9	6.0	3.7	5.3	0.5	1.0	.....	1.1	3.0	2.8	25.0
28	8 06	2 19	7 58*a*	2 24*b*	4.1	5.0	3.1	4.4	0.5	0.9	.....	1.0	2.5	2.3	25.0
29	8 00	2 11	7 46*a*	2 18*b*	4.5	5.5	3.4	4.8	0.5	0.9	.....	1.0	2.8	2.5	25.0
30	7 45	1 57	7 31*a*	2 04*b*	4.1	5.0	3.1	4.4	0.5	0.9	.....	1.0	2.5	2.3	25.0
31	7 15	1 27	7 02*a*	1 33*b*	4.9	6.0	3.7	5.3	0.5	1.0	.....	1.1	3.0	2.8	24.5
32	7 55	2 07	7 41*a*	2 14*b*	4.1	5.0	3.1	4.4	0.5	0.9	.....	1.0	2.5	2.3	24.0
33	8 05	2 17	7 54*a*	2 23*b*	4.6	5.6	3.4	5.0	0.5	0.9	.....	1.0	2.8	2.6	24.0
34	8 05	2 17	7 57*a*	2 23*b*	5.2	6.4	3.9	5.6	0.5	1.0	.....	1.1	3.2	3.0	23.5
35	7 43	1 55	7 31*a*	2 01*b*	5.3	6.5	4.0	5.7	0.5	1.0	.....	1.1	3.2	3.0	23.5
36	7 45	1 57	7 33*a*	2 03*b*	5.4	6.6	4.1	5.8	0.5	1.0	.....	1.1	3.3	3.0	23.5
37	7 25	1 37	7 13*a*	1 43*b*	5.3	6.5	4.0	5.7	0.5	1.0	.....	1.1	3.2	3.0	23.0
38	7 45	1 57	7 33*a*	2 03*b*	5.3	6.5	4.0	5.7	0.5	1.0	.....	1.1	3.2	3.0	22.5
39	7 50	2 03	7 38*a*	2 09*b*	5.4	6.5	4.0	5.8	0.5	1.0	.....	1.1	3.2	3.0	22.0
40	7 39	1 51	7 27*a*	1 57*b*	5.3	6.5	4.0	5.7	0.5	1.0	.....	1.1	3.2	3.0	22.0
41	7 30	1 42	7 18*a*	1 48*b*	5.2	6.4	4.0	5.7	0.5	1.0	.....	1.1	3.2	3.0	21.5
42	7 33	1 46	7 21*a*	1 52*b*	4.3	5.2	3.2	4.7	0.5	1.0	3 20	1.0	2.6	2.5	21.5
43	7 15	1 27	6 59*a*	1 35*b*	3.3	4.0	2.5	3.6	0.4	0.8	.....	0.9	2.0	1.9	22.0
44	6 15	0 27	5 59*a*	0 35*b*	3.4	4.1	2.6	3.7	0.4	0.8	.....	0.9	2.0	1.9	22.0
45	7 30	1 42	7 19*a*	1 48*b*	6.1	7.5	4.6	6.5	0.6	1.1	.....	1.2	3.8	3.4	21.0
46	7 32	1 44	7 20*a*	1 50*b*	5.8	7.1	4.4	6.2	0.6	1.1	.....	1.2	3.6	3.2	21.0
47	7 30	1 42	7 19*a*	1 48*b*	6.1	7.5	4.6	6.5	0.6	1.1	.....	1.2	3.8	3.4	20.5
48	7 39	1 51	7 27*a*	1 57*b*	5.7	7.0	4.3	6.1	0.6	1.1	.....	1.2	3.5	3.2	20.0
49	7 31	1 43	7 21*a*	1 48*b*	6.4	7.9	4.8	6.8	0.6	1.1	.....	1.2	4.0	3.6	20.0
50	7 35	1 47	7 24*a*	1 52*b*	6.5	8.0	4.9	6.9	0.6	1.1	.....	1.2	4.0	3.6	20.0
51	7 49	2 01	7 38*a*	2 07*b*	6.1	7.5	4.6	6.5	0.6	1.1	.....	1.2	3.8	3.4	19.5
52	7 46	1 58	7 36*a*	2 04*b*	6.4	7.8	4.8	6.8	0.6	1.1	.....	1.2	3.9	3.5	19.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST)—Continued.										
	NOVA SCOTIA—continued.						*Time Meridian. 60° W.*		*Mean Low Water Springs.*		
	Outer coast—Continued.	*North.*	*West.*								
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Rugged Island Harbor	43 42	65 06	4 20	Halifax	57	+0 10	+0 10	+ 2.1	+0.3	1.43
2	Shelburne	43 45	65 19	4 21	Halifax	57	+0 22	+0 22	+ 1.6	+0.2	1.33
3	Negro Harbor	43 34	65 25	4 22	Halifax	57	+0 23	+0 23	+ 1.6	+0.2	1.33
4	Barrington	43 33	65 34	4 22	Halifax	57	+1 22	+1 22	+ 5.2	+0.6	2.09
5	Cape Sable Light	43 23	65 37	4 22	Halifax	57	+1 17	+1 17	+ 5.3	+0.5	2.12
	Bay of Fundy.										
6	Seal Island Light	43 24	66 01	4 24	St. John, N. B	61	−1 33	−1 36	−10.4	−0.6	0.54
7	Pubnico	43 38	65 47	4 23	St. John, N. B	61	−1 58	−1 56	−11.1	−0.7	0.50
8	Argyle	43 42	65 50	4 23	St. John, N. B	61	−1 56	−1 49	−10.4	−0.6	0.54
9	Yarmouth	43 50	66 08	4 25	St. John, N. B	61	−1 06	−1 16	− 7.4	−0.4	0.67
10	Grand Passage, St. Mary Bay	44 15	66 20	4 25	St. John, N. B	61	−0 30	−0 28	− 2.8	−0.2	0.87
11	Petite Passage, St. Mary Bay	44 23	66 12	4 25	St. John, N. B	61	−0 33	−0 27	− 1.7	−0.1	0.92
12	Weymouth, St. Mary Bay	44 27	66 01	4 24	St. John, N. B	61	−0 25	−0 21	+ 0.2	0.0	1.01
13	Digby Pier	44 41	65 46	4 23	St. John, N. B	61	−0 17	−0 16	+ 3.5	+0.3	1.15
14	Annapolis	44 45	65 30	4 22	St. John, N. B	61	+0 07	+0 11	+ 4.6	+0.4	1.20
15	Port George	45 00	65 09	4 21	St. John, N. B	61	−0 06	+0 12	+ 7.6	+0.6	1.33
16	Isle Haute Light	45 15	65 01	4 20	St. John, N. B	61	−0 03	+0 26	+ 8.6	+0.6	1.38
17	Black Rock Light	45 10	64 46	4 19	St. John, N. B	61	+0 04	+0 38	+11.4	+0.8	1.51
18	Spencer Anchorage	45 20	64 42	4 19	St. John, N. B	61	+0 18	+0 58	+14.2	+1.0	1.63
19	Parrsboro, Minas Basin	45 23	64 19	4 17	St. John, N. B	61	+0 54	+1 31	+18.0	+1.2	1.80
20	Horton Bluff, Minas Basin	45 07	64 13	4 17	St. John, N. B	61	+1 06	+1 50	+22.6	+1.6	2.01
21	Noel Bay, Minas Basin	45 19	63 45	4 15	St. John, N. B	61	+1 15	+1 59	+25.0	+1.6	2.11
22	Spicer Cove	45 25	64 54	4 20	St. John, N. B	61	+0 13	+0 57	+12.2	+1.0	1.54
	NEW BRUNSWICK—continued.										
	Bay of Fundy.										
23	Sackville	45 53	64 22	4 17	St. John, N. B	61	+0 31	+1 40	+20.0	+1.4	1.89
24	Grindstone Island Light	45 43	64 27	4 18	St. John, N. B	61	+0 22	+1 21	+16.1	+1.1	1.72
25	Folly Point	45 52	64 34	4 18	St. John, N. B	61	+0 25	+1 20	+19.8	+1.4	1.89
26	Moncton Railway	46 06	64 47	4 19	St. John, N. B	61	+0 47	+1 51	+21.8	+1.4	1.97
27	Quaco	45 21	65 32	4 22	St. John, N. B	61	+0 13	+0 57	+ 5.8	+0.4	1.26
28	ST. JOHN Harbor	45 14	66 04	4 24	St. John, N. B	61	0 00	0 00	0.0	0.0	1.00
29	Lepreau Bay	45 07	66 31	4 26	St. John, N. B	61	0 00	+0 04	+ 0.6	0.0	1.03
30	L'Etang	45 04	66 50	4 27	St. John, N. B	61	+0 02	+0 06	− 0.6	0.0	0.97
31	Welchpool, Campobello Island	44 53	66 57	4 28	St. John, N. B	61	+0 03	+0 09	− 0.3	+0.2	0.98
32	Fish Head, Grand Manan Island	44 47	66 44	4 27	St. John, N. B	61	−0 02	+0 26	− 1.3	−0.1	0.94
33	Seal Cove, Grand Manan Island	44 38	66 50	4 27	St. John, N. B	61	−0 21	+0 01	− 3.6	−0.2	0.84
34	Machias Seal Island Light	44 30	67 06	4 28	St. John, N. B	61	−0 07	+0 07	− 5.5	−0.3	0.75
	MAINE.						*Time meridian, 75° W.*		*Mean Low Water.*		
35	Eastport	44 54	66 59	4 28	St. John, N. B	61	−0 55	−0 50	− 4.1	−1.4	0.87
36	Gleason Cove, Western Passage	44 58	67 03	4 28	St. John, N. B	61	−0 50	−0 42	− 3.9	−1.4	0.88
37	Robbinston, St. Croix River	45 05	67 06	4 28	St. John, N. B	61	−0 49	−0 40	− 3.1	−1.4	0.92
38	Dochet Island Lt., St. Croix River	45 08	67 08	4 29	St. John, N. B	61	−0 47	−0 36	− 2.7	−1.4	0.94
39	Ledge, St. Croix River, N. B	45 10	67 12	4 29	St. John, N. B	61	−0 40	−0 28	− 2.3	−1.4	0.96
40	Calais, St. Croix River	45 11	67 17	4 29	St. John, N. B	61	−0 27	−0 15	− 2.0	−1.4	0.97
41	Deep Cove, Cobscook Bay	44 54	67 01	4 28	St. John, N. B	61	−0 50	−0 40	− 3.6	−1.4	0.89
42	Garnet Point, Cobscook Bay	44 56	67 07	4 28	St. John, N. B	61	−0 44	−0 33	− 3.2	−1.4	0.91
43	Coffin Point, Cobscook Bay	44 52	67 07	4 28	St. John, N. B	61	−0 25	−0 11	− 4.0	−1.4	0.88
44	Bitch Islands, Cobscook Bay	44 52	67 09	4 29	St. John, N. B	61	+0 06	+0 29	− 4.7	−1.4	0.84
45	Federal Harbor, Cobscook Bay	44 52	67 04	4 28	St. John, N. B	61	−0 40	−0 28	− 3.1	−1.4	0.92
46	Lubec	44 52	66 59	4 28	St. John, N. B	61	−1 00	−0 49	− 4.8	−1.4	0.84
47	West Quoddy Head	44 49	66 59	4 28	St. John, N. B	61	−1 06	−1 03	− 6.6	−1.4	0.75
48	Moose Cove	44 44	67 06	4 28	St. John, N. B	61	−1 07	−1 04	− 7.5	−1.4	0.71
49	Cutler, Little River	44 39	67 13	4 29	St. John, N. B	61	−1 07	−1 04	− 8.4	−1.4	0.67
50	Starboard Island, Machias Bay	44 36	67 23	4 30	St. John, N. B	61	−1 08	−0 56	− 9.4	−1.4	0.62
51	Machiasport, Machias River	44 42	67 24	4 30	St. John, N. B	61	−1 03	−0 52	− 9.3	−1.4	0.62
52	Bare Cove, Little Kennebec Bay	44 37	67 26	4 30	St. John, N. B	61	−1 10	−0 59	− 9.9	−1.4	0.59
53	Roque I. Harbor, Englishman Bay	44 34	67 31	4 30	Boston	69	−0 49	−0 42	+ 2.7	0.0	1.28
54	Moose Peak Light	44 28	67 32	4 30	Boston	69	−0 50	−0 44	+ 2.2	0.0	1.23
55	Jonesport, Mooseabec Reach	44 32	67 36	4 30	Boston	69	−0 44	−0 43	+ 1.9	0.0	1.20
56	Nash Island Light	44 28	67 45	4 31	Boston	69	−0 51	−0 51	+ 1.4	0.0	1.15
57	Gibbs Island, Pleasant River	44 33	67 46	4 31	Boston	69	−0 41	−0 37	+ 1.7	0.0	1.18
58	Addison Point, Pleasant River	44 37	67 45	4 31	Boston	69	−0 20	−0 21	+ 2.2	0.0	1.23
59	Trafton Island, Narraguagus Bay	44 29	67 50	4 31	Boston	69	−0 44	−0 46	+ 1.5	0.0	1.16
60	Millbridge, Narraguagus Bay	44 32	67 53	4 32	Boston	69	−0 40	−0 30	+ 1.7	0.0	1.18
61	Pigeon Hill Bay	44 27	67 52	4 31	Boston	69	−0 42	−0 44	+ 1.5	0.0	1.16
62	Goods Point, Dyer Bay	44 27	67 55	4 32	Boston	69	−0 43	−0 43	+ 1.3	0.0	1.14
63	Jetteaus Point, Gouldsboro Bay	44 28	67 59	4 32	Boston	69	−0 44	−0 44	+ 1.2	0.0	1.12
64	Indian Harbor	44 24	67 58	4 32	Boston	69	−0 45	−0 45	+ 0.9	0.0	1.09

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	7 38	1 50	7 27*a*	1 56*b*	6.1	7.5	4.6	6.5	0.6	1.1	.....	1.2	3.8	3.4	19.5
2	7 49	2 01	7 37*a*	2 07*b*	5.7	7.0	4.3	6.1	0.6	1.1	.....	1.2	3.5	3.2	19.0
3	7 49	2 01	7 37*a*	2 07*b*	5.7	7.0	4.3	6.1	0.6	1.1	.....	1.2	3.5	3.2	19.0
4	8 48	3 00	8 41*a*	3 04*b*	9.0	11.0	6.7	9.5	0.7	1.3	.....	1.4	5.5	4.9	19.0
5	8 42	2 55	8 33*a*	3 00*b*	9.1	11.0	6.8	9.6	0.6	1.1	.....	1.3	5.5	3.8	19.0
6	9 35	3 23	9 30*a*	3 29*b*	11.2	12.8	9.5	11.0	1.0	0.9	.....	1.3	6.4	5.7	18.5
7	9 11	3 04	9 06*a*	3 10*b*	10.5	12.0	8.9	10.3	1.0	0.8	.....	1.2	6.0	5.1	19.0
8	9 13	3 11	9 08*a*	3 17*b*	11.2	12.8	9.5	11.0	1.0	0.9	.....	1.3	6.4	5.7	19.0
9	10 01	3 42	9 56*a*	3 47*b*	14.0	16.0	11.8	13.8	1.1	1.0	.....	1.4	8.0	7.1	19.0
10	10 37	4 30	10 33*a*	4 34*b*	18.2	20.8	15.4	17.9	1.3	1.1	.....	1.6	10.4	9.2	19.0
11	10 34	4 31	10 30*a*	4 35*b*	19.3	22.0	16.3	19.0	1.3	1.1	.....	1.7	11.0	9.7	19.0
12	10 43	4 38	10 39*a*	4 42*b*	21.1	24.1	17.9	20.7	1.4	1.2	.....	1.8	12.0	10.6	19.5
13	10 52	4 44	10 48*a*	4 40*b*	24.1	27.5	20.4	23.6	1.5	1.3	.....	1.9	13.8	12.1	20.0
14	11 17	5 12	11 14*a*	5 16*b*	25.1	28.7	21.2	24.7	1.5	1.3	.....	1.9	14.4	12.6	20.0
15	11 05	5 14	11 01*a*	5 14*b*	27.8	32.0	23.3	28.6	1.5	1.3	.....	1.9	16.0	14.2	21.0
16	11 09	5 29	11 06*a*	5 32*b*	28.9	33.0	24.4	28.4	1.6	1.4	.....	2.0	16.5	14.5	21.0
17	11 17	5 42	11 14*a*	5 45*b*	31.5	36.0	26.6	31.0	1.7	1.5	.....	2.2	18.0	15.7	21.5
18	11 31	6 02	11 26*a*	6 03*b*	34.0	39.0	28.4	35.0	1.9	1.6	.....	2.3	19.5	17.4	21.5
19	12 09	6 37	11 41*a*	6 34*b*	37.7	43.0	31.9	37.1	1.9	1.6	.....	2.3	21.5	18.9	22.0
20	12 21	6 56	12 18*a*	6 59*b*	42.0	48.0	35.5	41.4	2.0	1.7	.....	2.5	24.0	21.1	22.0
21	0 07	7 07	0 04*b*	7 10*b*	44.2	50.5	37.4	43.6	2.0	1.7	.....	2.5	25.2	22.2	21.5
22	11 25	6 00	11 22*a*	6 03*b*	32.2	37.0	26.9	33.2	2.0	1.7	.....	2.5	18.5	16.5	21.5
23	11 46	6 46	11 53*a*	6 49*b*	39.6	45.2	33.5	39.0	1.9	1.6	.....	2.4	22.6	19.9	22.5
24	11 36	6 26	11 33*a*	6 29*b*	35.9	41.0	30.4	35.3	1.8	1.5	.....	2.3	20.5	18.1	22.5
25	11 39	6 25	11 36*a*	6 28*b*	39.4	45.0	33.3	38.8	1.9	1.6	.....	2.4	22.5	19.8	22.5
26	12 00	6 55	11 57*a*	6 58*b*	41.2	47.0	34.9	40.5	1.9	1.7	.....	2.5	23.5	20.7	22.5
27	11 23	5 58	11 20*a*	6 01*b*	26.3	30.0	22.2	25.8	1.5	1.3	.....	2.0	15.0	13.3	21.0
28	11 08	4 59	11 04*a*	5 03*b*	20.9	23.8	17.6	21.3	1.4	1.4	8 06	1.8	11.9	10.7	20.5
29	11 06	5 01	11 02*a*	5 05*b*	21.5	24.5	18.2	21.0	1.4	1.2	.....	1.8	12.2	10.8	20.0
30	11 07	5 02	11 03*a*	5 06*b*	20.3	23.3	17.1	21.0	1.4	1.2	.....	1.9	11.6	10.4	19.0
31	11 07	5 04	11 03*a*	5 08*b*	20.4	23.5	17.0	21.1	1.3	1.2	.....	1.8	11.8	10.3	19.0
32	11 03	5 22	10 59*a*	5 26*b*	19.7	22.5	16.7	19.4	1.3	1.1	.....	1.7	11.2	9.8	19.5
33	10 44	4 57	10 39*a*	5 02*b*	17.5	20.0	14.8	17.2	1.3	1.1	.....	1.6	10.0	8.8	19.0
34	10 57	5 02	10 52*a*	5 07*b*	15.7	18.0	13.2	16.3	1.2	1.1	.....	1.6	9.0	8.0	18.5
35	11 09	5 05	11 04*a*	5 09*b*	18.2	20.7	15.5	18.4	1.4	1.3	8 14	1.7	9.1	9.2	19.0
36	11 14	5 13	11 09*a*	5 17*b*	18.4	20.9	15.6	18.6	1.4	1.3	.....	1.7	9.2	9.4	19.0
37	11 15	5 15	11 10*a*	5 19*b*	19.2	21.8	16.3	19.4	1.4	1.3	.....	1.7	9.6	9.8	19.0
38	11 16	5 18	11 11*a*	5 22*b*	19.6	22.3	16.7	19.8	1.4	1.3	.....	1.7	9.8	10.0	19.0
39	11 23	5 26	11 18*a*	5 30*b*	20.0	22.8	17.0	20.2	1.4	1.3	.....	1.7	10.0	10.2	19.0
40	11 36	5 39	11 31*a*	5 43*b*	20.3	23.1	17.2	20.5	1.4	1.3	.....	1.7	10.1	10.3	19.0
41	11 14	5 15	11 09*a*	5 19*b*	18.7	21.3	15.9	18.9	1.4	1.3	.....	1.7	9.8	9.5	19.0
42	11 20	5 22	11 15*a*	5 26*b*	19.1	21.8	16.2	19.3	1.4	1.3	.....	1.7	9.6	9.8	19.0
43	11 39	5 44	11 34*a*	5 48*b*	18.3	20.8	15.5	18.5	1.4	1.3	.....	1.7	9.1	9.3	19.0
44	12 11	6 23	12 06*a*	6 27*b*	17.6	20.0	14.9	17.8	1.4	1.3	.....	1.7	8.8	9.0	19.0
45	11 24	5 27	11 19*a*	5 31*b*	19.2	21.9	16.3	19.4	1.4	1.3	.....	1.7	9.6	9.8	19.0
46	11 04	5 06	10 59*a*	5 11*b*	17.5	20.0	14.9	17.8	1.4	1.3	.....	1.7	8.8	9.0	19.0
47	10 58	4 52	10 52*a*	4 57*b*	15.7	17.9	13.4	16.0	1.4	1.3	.....	1.7	7.9	8.1	19.0
48	10 57	4 51	10 51*a*	4 56*b*	14.8	16.9	12.6	15.1	1.4	1.3	.....	1.7	7.4	7.6	18.5
49	10 56	4 50	10 50*a*	4 56*b*	13.9	15.9	11.8	14.3	1.4	1.2	.....	1.7	7.0	7.2	18.5
50	10 54	4 57	10 48*a*	5 03*b*	12.9	14.7	10.9	13.3	1.4	1.2	.....	1.7	6.4	6.6	18.5
51	10 59	5 01	10 53*a*	5 07*b*	13.0	14.8	11.1	13.4	1.4	1.2	.....	1.7	6.5	6.7	18.0
52	10 52	4 54	10 46*a*	5 00*b*	12.4	14.2	10.6	12.8	1.4	1.2	.....	1.7	6.2	6.4	18.0
53	10 53	4 50	10 47*a*	4 56*b*	12.3	14.0	10.5	12.7	1.4	1.2	.....	1.7	6.2	6.4	18.0
54	10 52	4 48	10 46*a*	4 55*b*	11.8	13.5	10.1	12.3	1.4	1.1	.....	1.7	5.9	6.1	18.0
55	10 58	4 49	10 52*a*	4 56*b*	11.5	13.1	9.8	12.0	1.4	1.1	.....	1.7	5.8	6.0	18.0
56	10 50	4 40	10 44*a*	4 47*b*	11.0	12.5	9.4	11.5	1.4	1.1	.....	1.7	5.5	5.7	18.0
57	11 00	4 54	10 54*a*	5 01*b*	11.3	12.9	9.6	11.8	1.4	1.1	.....	1.7	5.6	5.8	18.0
58	11 21	5 10	11 15*a*	5 17*b*	11.8	13.4	10.0	12.3	1.4	1.1	.....	1.7	5.9	6.1	18.0
59	10 57	4 45	10 51*a*	4 52*b*	11.1	12.6	9.4	11.6	1.4	1.1	.....	1.7	5.5	5.7	17.5
60	11 00	5 00	10 54*a*	5 07*b*	11.3	12.9	9.6	11.8	1.4	1.1	.....	1.7	5.6	5.8	17.5
61	10 59	4 47	10 53*a*	4 54*b*	11.1	12.7	9.4	11.6	1.4	1.1	.....	1.7	5.6	5.8	17.5
62	10 57	4 47	10 51*a*	4 54*b*	10.9	12.4	9.2	11.4	1.4	1.1	.....	1.7	5.4	5.6	17.5
63	10 56	4 46	10 50*a*	4 53*b*	10.8	12.3	9.2	11.3	1.4	1.1	.....	1.7	5.4	5.6	17.5
64	10 55	4 45	10 49*a*	4 52*b*	10.5	12.0	8.9	11.0	1.4	1.1	.....	1.7	5.2	5.4	17.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST)—Continued.	*North.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water.*		
	MAINE—continued.	° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Prospect Harbor	44 24	68 01	4 32	Boston	69	−0 44	−0 45	+1.1	0.0	1.11
2	Winter Harbor, Frenchman Bay	44 23	68 05	4 32	Boston	69	−0 43	−0 43	+0.7	0.0	1.07
3	Eastern Pt. Har., Frenchman Bay	44 28	68 11	4 33	Boston	69	−0 40	−0 39	+0.9	0.0	1.09
4	Sullivan, Frenchman Bay	44 31	68 12	4 33	Boston	69	−0 30	−0 30	+0.9	0.0	1.09
5	Mount Desert Narrows	44 26	68 22	4 33	Boston	69	−0 29	−0 34	+0.9	0.0	1.09
6	Salisbury Cove, Mt. Desert Island	44 26	68 17	4 33	Boston	69	−0 36	−0 38	+1.0	0.0	1.10
7	Bar Harbor, Mt. Desert Island	44 23	68 12	4 33	Boston	69	−0 41	−0 40	+0.9	0.0	1.09
8	Southwest Har., Mt. Desert Island	44 16	68 19	4 33	Boston	69	−0 41	−0 43	+0.7	0.0	1.07
9	Somesville, Mt. Desert Island	44 22	68 20	4 33	Boston	69	−0 37	−0 34	+1.0	0.0	1.10
10	Bass Harbor, Mt. Desert Island	44 14	68 21	4 33	Boston	69	−0 37	−0 42	+0.6	0.0	1.06
11	Pretty Marsh Har., Mt. Desert I.	44 20	68 25	4 34	Boston	69	−0 33	−0 38	+0.6	0.0	1.06
12	Union River, Blue Hill Bay	44 30	68 26	4 34	Boston	69	−0 29	−0 33	+0.8	0.0	1.08
13	Blue Hill Harbor, Blue Hill Bay	44 24	68 34	4 34	Boston	69	−0 31	−0 36	+0.7	0.0	1.07
14	Allen Cove, Blue Hill Bay	44 18	68 32	4 34	Boston	69	−0 33	−0 38	+0.7	0.0	1.07
15	Mackerel Cove, Blue Hill Bay	44 10	68 26	4 34	Boston	69	−0 36	−0 40	+0.6	0.0	1.06
	Penobscot Bay.										
16	Naskeag Har., Eggemoggin Reach	44 13	68 33	4 34	Boston	69	−0 37	−0 40	+0.6	0.0	1.06
17	Center Harbor, Eggemoggin Reach	44 16	68 35	4 34	Boston	69	−0 34	−0 33	+0.5	0.0	1.05
18	Sedgwick, Eggemoggin Reach	44 18	68 37	4 34	Boston	69	−0 32	−0 32	+0.6	0.0	1.06
19	Head Harbor, Isle au Haut	44 01	68 37	4 34	Boston	69	−0 49	−0 52	−0.5	0.0	0.95
20	Kimball Island	44 04	68 39	4 35	Boston	69	−0 40	−0 47	0.0	0.0	1.00
21	Oceanville, Deer Isle	44 12	68 38	4 35	Boston	69	−0 38	−0 42	+0.5	0.0	1.05
22	Stonington, Deer Isle	44 09	68 40	4 35	Boston	69	−0 38	−0 42	+0.1	0.0	1.01
23	Northwest Harbor, Deer Isle	44 13	68 41	4 35	Boston	69	−0 32	−0 37	+0.5	0.0	1.05
24	Matinicus Harbor	43 52	68 53	4 36	Boston	69	−0 41	−0 46	−0.5	0.0	0.95
25	Carvers Harbor, Vinal Haven I	44 08	68 50	4 35	Boston	69	−0 36	−0 43	−0.2	0.0	0.98
26	Iron Point, North Haven Island	44 08	68 52	4 35	Boston	69	−0 34	−0 37	−0.1	0.0	0.99
27	Pulpit or North Har., N. Haven I	44 09	68 53	4 36	Boston	69	−0 27	−0 32	+0.2	0.0	1.02
28	Castine	44 23	68 48	4 35	Boston	69	−0 25	−0 27	+0.1	0.0	1.01
29	Pumpkin Island, South Bay	44 25	68 44	4 35	Boston	69	−0 10	+0 05	+0.7	0.0	1.07
30	Fort Point, Penobscot River	44 28	68 49	4 35	Boston	69	−0 27	−0 31	+0.7	0.0	1.07
31	Bucksport, Penobscot River	44 34	68 48	4 35	Boston	69	−0 23	−0 27	+1.4	0.0	1.15
32	South Orrington, Penobscot River	44 42	68 49	4 35	Boston	69	−0 20	−0 22	+2.7	0.0	1.28
33	Hampden, Penobscot River	44 45	68 50	4 35	Boston	69	−0 19	−0 20	+3.2	0.0	1.33
34	Bangor, Penobscot River	44 49	68 47	4 35	Boston	69	−0 17	−0 18	+3.5	0.0	1.36
35	Belfast	44 25	69 00	4 36	Boston	69	−0 26	−0 31	+0.1	0.0	1.01
36	Camden	44 12	69 03	4 36	Boston	69	−0 27	−0 32	0.0	0.0	1.00
37	Rockland	44 06	69 06	4 36	Boston	69	−0 28	−0 33	+0.1	0.0	1.01
38	Owlshead Light	44 06	69 03	4 36	Boston	69	−0 28	−0 33	−0.2	0.0	0.98
39	Dyers Point, Weskeag River	44 02	69 07	4 36	Boston	69	−0 28	−0 33	0.0	0.0	1.00
	Outer coast.										
40	Tenants Harbor	43 58	69 12	4 37	Portland	65	−0 11	−0 11	+0.4	0.0	1.04
41	Port Clyde	43 56	69 16	4 37	Portland	65	−0 15	−0 14	+0.4	0.0	1.04
42	Thomaston, St. George River	44 04	69 11	4 37	Portland	65	−0 03	0 00	+0.4	0.0	1.04
43	New Harbor, Muscongus Bay	43 52	69 29	4 38	Portland	65	−0 12	−0 12	0.0	0.0	1.00
44	Muscongus Harbor, Muscongus Bay	43 58	69 27	4 38	Portland	65	−0 09	−0 09	+0.6	0.0	1.07
45	Broad Cove, Medomak River	44 02	69 24	4 38	Portland	65	−0 06	−0 06	−0.1	0.0	0.99
46	Waldoboro, Medomak River	44 06	69 22	4 37	Portland	65	0 00	0 00	+0.6	0.0	1.07
47	Pemaquid Harbor, Johns Bay	43 52	69 32	4 38	Portland	65	−0 10	−0 12	−0.1	0.0	0.99
48	East Boothbay, Damariscotta R.	43 52	69 35	4 38	Portland	65	−0 07	−0 09	+0.2	0.0	1.02
49	Newcastle, Damariscotta River	44 03	69 33	4 38	Portland	65	+0 04	+0 11	−0.4	0.0	0.96
50	Boothbay Harbor	43 51	69 37	4 38	Portland	65	−0 09	−0 09	−0.1	0.0	0.99
51	Herman Harbor, Sheepscot River	43 49	69 43	4 39	Portland	65	−0 06	−0 06	−0.4	0.0	0.96
52	Jewett Cove, Sheepscot River	43 52	69 42	4 39	Portland	65	−0 01	0 00	−0.2	0.0	0.98
53	Wiscasset, Sheepscot River	44 00	69 40	4 39	Portland	65	+0 10	+0 11	+0.5	0.0	1.06
54	Heals Cove, Hockomoc Bay	43 53	69 44	4 39	Portland	65	+0 20	+0 24	+0.3	0.0	1.03
	Kennebec River.										
55	Hunniwell Point	43 45	69 47	4 39	Portland	65	−0 02	−0 05	−0.6	0.0	0.93
56	Parkers Head	43 47	69 47	4 39	Portland	65	+0 07	+0 08	−1.0	0.0	0.89
57	Phippsburg	43 49	69 48	4 39	Portland	65	+0 17	+0 24	−1.4	0.0	0.84
58	Bath	43 55	69 49	4 39	Portland	65	+1 02	+1 19	−2.5	0.0	0.72
59	Pleasant Point, Androscoggin R	43 58	69 53	4 40	Portland	65	+2 14	+3 08	−4.2	0.0	0.53
60	Bowdoinham, Cathance River	44 01	69 54	4 40	Portland	65	+2 27	+2 51	−3.4	0.0	0.62
61	Abagadasset Point	44 00	69 49	4 39	Portland	65	+2 12	+2 13	−3.4	0.0	0.62
62	Richmond	44 05	69 48	4 39	Portland	65	+2 47	+3 02	−3.6	0.0	0.60
63	Nehumkeag Island	44 10	69 45	4 39	Portland	65	+3 20	+3 45	−3.6	0.0	0.60
64	Gardiner	44 14	69 46	4 39	Portland	65	+3 42	+4 24	−3.9	0.0	0.56
65	Hallowell	44 17	69 47	4 39	Portland	65	+3 58	+5 02	−4.6	0.0	0.48
66	Augusta	44 19	69 46	4 39	Portland	65	+4 02	+5 32	−4.8	0.0	0.46

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	10 56	4 45	10 50*a*	4 52*b*	10.7	12.2	9.1	11.2	1.4	1.1	.....	1.7	5.4	5.6	17.0
2	10 57	4 47	10 51*a*	4 54*b*	10.3	11.7	8.8	10.8	1.4	1.1	.....	1.7	5.2	5.4	17.0
3	10 59	4 50	10 53*a*	4 57*b*	10.5	12.0	8.9	11.0	1.4	1.1	.....	1.7	5.3	5.6	17.0
4	11 09	4 59	11 03*a*	5 06*b*	10.5	12.0	8.9	11.0	1.4	1.1	.....	1.7	5.3	5.6	17.0
5	11 10	4 55	11 04*a*	5 02*b*	10.5	12.0	8.9	11.0	1.4	1.1	.....	1.7	5.2	5.5	17.0
6	11 03	4 51	10 57*a*	4 58*b*	10.6	12.1	9.0	11.1	1.4	1.1	.....	1.7	5.3	5.6	17.0
7	10 58	4 49	10 52*a*	4 56*b*	10.5	12.0	8.9	11.0	1.4	1.1	.....	1.7	5.3	5.6	17.0
8	10 58	4 46	10 52*a*	4 53*b*	10.3	11.7	8.7	10.8	1.4	1.1	.....	1.7	5.1	5.5	16.5
9	11 02	4 55	10 56*a*	5 02*b*	10.6	12.0	9.0	11.1	1.4	1.1	.....	1.7	5.3	5.7	16.5
10	11 02	4 47	10 56*a*	4 54*b*	10.2	11.6	8.7	10.7	1.4	1.1	.....	1.7	5.1	5.5	16.5
11	11 05	4 50	10 59*a*	4 57*b*	10.2	11.7	8.7	10.7	1.4	1.1	.....	1.7	5.1	5.5	16.5
12	11 09	4 55	11 03*a*	5 02*b*	10.4	11.9	8.8	10.9	1.4	1.1	.....	1.7	5.2	5.6	16.5
13	11 07	4 52	11 01*a*	4 59*b*	10.3	11.7	8.8	10.8	1.4	1.1	.....	1.7	5.2	5.6	16.5
14	11 05	4 50	10 59*a*	4 57*b*	10.3	11.7	8.7	10.8	1.4	1.1	.....	1.7	5.1	5.5	16.5
15	11 02	4 48	10 56*a*	4 55*b*	10.2	11.7	8.7	10.7	1.4	1.1	.....	1.7	5.1	5.5	16.5
16	11 01	4 48	10 55*a*	4 56*b*	10.2	11.6	8.6	10.7	1.4	1.1	.....	1.7	5.1	5.5	16.0
17	11 04	4 55	10 58*a*	5 03*b*	10.1	11.5	8.6	10.6	1.4	1.1	.....	1.7	5.0	5.4	16.0
18	11 06	4 56	11 00*a*	5 04*b*	10.2	11.7	8.7	10.7	1.4	1.1	.....	1.7	5.1	5.5	16.0
19	10 49	4 36	10 43*a*	4 44*b*	9.1	10.4	7.7	9.7	1.3	1.0	.....	1.6	4.6	5.0	16.0
20	10 57	4 40	10 51*a*	4 48*b*	9.6	10.9	8.1	10.2	1.3	1.0	.....	1.6	4.8	5.2	16.0
21	10 59	4 45	10 53*a*	4 53*b*	10.1	11.5	8.6	10.7	1.4	1.1	.....	1.7	5.0	5.4	16.0
22	10 59	4 45	10 53*a*	4 53*b*	9.7	11.0	8.2	10.3	1.3	1.0	.....	1.6	4.8	5.2	16.0
23	11 05	4 50	10 59*a*	4 58*b*	10.1	11.5	8.6	10.7	1.4	1.1	.....	1.7	5.0	5.4	16.0
24	10 55	4 40	10 49*a*	4 48*b*	9.1	10.4	7.8	9.7	1.3	1.0	.....	1.6	4.6	5.0	16.0
25	11 01	4 44	10 55*a*	4 52*b*	9.4	10.7	8.0	10.0	1.3	1.0	.....	1.6	4.7	5.1	16.0
26	11 03	4 50	10 57*a*	4 58*b*	9.5	10.8	8.1	10.1	1.3	1.0	.....	1.6	4.7	5.1	16.0
27	11 09	4 54	11 03*a*	5 02*b*	9.8	11.1	8.3	10.4	1.3	1.0	8 14	1.6	4.9	5.3	16.0
28	11 12	5 00	11 06*a*	5 08*b*	9.7	11.1	8.3	10.3	1.3	1.0	.....	1.6	4.8	5.2	16.5
29	11 27	5 32	11 21*a*	5 40*b*	10.3	11.7	8.7	10.9	1.4	1.1	.....	1.7	5.1	5.5	16.5
30	11 10	4 56	11 04*a*	5 04*b*	10.3	11.8	8.8	10.9	1.4	1.1	.....	1.7	5.2	5.6	16.5
31	11 14	5 00	11 08*a*	5 08*b*	11.0	12.5	9.4	11.6	1.4	1.1	.....	1.7	5.5	5.9	17.0
32	11 17	5 06	11 11*a*	5 13*b*	12.3	14.0	10.4	12.9	1.4	1.1	.....	1.7	6.1	6.5	17.0
33	11 18	5 07	11 12*a*	5 15*b*	12.8	14.6	10.9	13.4	1.4	1.1	.....	1.7	6.4	6.8	17.0
34	11 20	5 14	11 14*a*	5 22*b*	13.1	14.9	11.1	13.7	1.4	1.1	.....	1.7	6.6	7.0	17.5
35	11 10	4 56	11 04*a*	5 03*b*	9.7	11.1	8.3	10.3	1.3	1.0	.....	1.6	4.9	5.3	16.5
36	11 09	4 54	11 03*a*	5 02*b*	9.6	10.9	8.1	10.2	1.3	1.0	.....	1.6	4.8	5.2	16.0
37	11 08	4 53	11 02*a*	5 01*b*	9.7	11.0	8.2	10.3	1.3	1.0	.....	1.6	4.8	5.2	16.0
38	11 08	4 53	11 02*a*	5 01*b*	9.4	10.7	8.0	10.0	1.3	1.0	.....	1.6	4.7	5.1	16.0
39	11 08	4 53	11 02*a*	5 01*b*	9.6	10.9	8.1	10.2	1.3	1.0	.....	1.6	4.8	5.2	16.0
40	11 04	4 49	10 58*a*	4 57*b*	9.8	10.6	7.9	9.9	1.3	1.0	.....	1.6	4.7	5.0	16.0
41	11 00	4 46	10 54*a*	4 54*b*	9.8	10.6	7.9	9.9	1.3	1.0	.....	1.6	4.7	5.0	16.0
42	11 12	5 00	11 06*a*	5 08*b*	9.8	10.6	7.9	9.9	1.3	1.0	.....	1.6	4.6	4.9	16.0
43	11 02	4 47	10 56*a*	4 55*b*	8.9	10.1	7.5	9.4	1.2	1.0	.....	1.6	4.4	4.7	15.5
44	11 05	4 50	10 59*a*	4 58*b*	9.5	10.9	8.1	10.1	1.3	1.0	.....	1.6	4.8	5.1	16.0
45	11 08	4 53	11 02*a*	5 01*b*	8.8	10.0	7.5	9.3	1.2	1.0	.....	1.6	4.4	4.7	16.0
46	11 15	5 00	11 09*a*	5 08*b*	9.5	10.9	8.1	10.1	1.3	1.0	.....	1.6	4.8	5.1	16.0
47	11 04	4 47	10 58*a*	4 55*b*	8.8	10.0	7.4	9.3	1.2	1.0	.....	1.6	4.4	4.7	15.5
48	11 07	4 50	11 01*a*	4 58*b*	9.1	10.4	7.7	9.7	1.3	1.0	.....	1.6	4.6	4.9	15.5
49	11 18	5 10	11 12*a*	5 18*b*	8.5	9.7	7.3	9.0	1.2	1.0	.....	1.6	4.3	4.6	16.0
50	11 05	4 50	10 59*a*	4 58*b*	8.8	10.0	7.5	9.3	1.2	1.0	.....	1.6	4.4	4.7	15.5
51	11 07	4 52	11 01*a*	5 00*b*	8.5	9.7	7.2	9.0	1.2	1.0	.....	1.6	4.2	4.5	15.5
52	11 12	4 58	11 06*a*	5 06*b*	8.7	9.9	7.4	9.2	1.2	1.0	.....	1.6	4.3	4.6	15.5
53	11 23	5 09	11 17*a*	5 17*b*	9.4	10.7	8.0	10.0	1.3	1.0	.....	1.6	4.7	5.0	16.0
54	11 33	5 22	11 27*a*	5 30*b*	9.2	10.5	7.8	9.8	1.3	1.0	.....	1.6	4.6	4.9	15.5
55	11 11	4 53	11 04*a*	5 01*b*	8.3	9.5	7.1	8.8	1.2	1.0	.....	1.6	4.2	4.5	15.5
56	11 20	5 06	11 13*a*	5 14*b*	7.9	9.0	6.7	8.4	1.2	0.9	.....	1.5	4.0	4.3	15.5
57	11 30	5 22	11 23*a*	5 30*b*	7.5	8.6	6.4	8.0	1.1	0.9	.....	1.4	3.8	4.1	15.5
58	12 15	6 17	12 08*a*	6 25*b*	6.4	7.3	5.5	6.8	1.1	0.8	.....	1.4	3.2	3.5	15.5
59	1 01	8 00	0 55*b*	8 08*b*	4.7	5.3	4.0	5.1	1.0	0.8	.....	1.3	2.3	2.6	15.5
60	1 14	7 48	1 07*b*	7 56*b*	5.5	6.3	4.7	5.9	1.1	0.8	.....	1.4	2.8	3.1	15.5
61	1 00	7 11	0 53*b*	7 19*b*	5.5	6.3	4.7	5.9	1.1	0.8	.....	1.4	2.8	3.1	15.5
62	1 35	8 00	1 28*b*	8 08*b*	5.3	6.0	4.5	5.7	1.1	0.8	.....	1.4	2.6	2.9	16.0
63	2 08	8 43	2 01*b*	8 51*b*	5.3	6.0	4.5	5.7	1.1	0.8	.....	1.4	2.6	2.9	16.0
64	2 30	9 22	2 23*b*	9 30*b*	5.0	5.7	4.2	5.4	1.1	0.7	.....	1.3	2.5	2.8	16.0
65	2 41	10 00	2 34*b*	10 08*b*	4.3	4.9	3.7	4.7	1.0	0.7	.....	1.2	2.2	2.5	16.0
66	2 50	10 30	2 43*b*	10 38*b*	4.1	4.6	3.5	4.5	1.0	0.7	.....	1.2	2.0	2.3	16.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST)—Continued.										
	MAINE—continued.										
	Casco Bay.	*North.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Small Point Harbor	43 44	69 51	4 39	Portland	65	−0 13	−0 10	−0.1	0.0	0.99
2	Birch Point, New Meadow River	43 50	69 52	4 39	Portland	65	−0 05	−0 02	+0.3	0.0	1.03
3	Lowell Cove, Orrs Island	43 45	69 59	4 40	Portland	65	−0 08	−0 07	−0.1	0.0	0.99
4	Harpswell Harbor	43 46	70 00	4 40	Portland	65	−0 03	−0 06	+0.1	0.0	1.01
5	Potts Harbor	43 44	70 02	4 40	Portland	65	−0 07	−0 09	−0.1	0.0	0.99
6	Middle Bay Cove, Middle Bay	43 51	69 58	4 40	Portland	65	−0 01	−0 04	+0.1	0.0	1.01
7	Flying Point	43 49	70 04	4 40	Portland	65	−0 03	−0 05	+0.1	0.0	1.01
8	South Freeport	43 49	70 06	4 40	Portland	65	−0 02	−0 04	+0.3	0.0	1.03
9	Chebeag Pt., Great Chebeag Id	43 46	70 06	4 40	Portland	65	−0 05	−0 07	+0.1	0.0	1.01
10	Prince Point	43 46	70 10	4 41	Portland	65	−0 02	−0 04	+0.1	0.0	1.01
11	Peaks Island	43 39	70 12	4 41	Portland	65	−0 09	−0 11	+0.2	0.0	1.02
12	PORTLAND	43 39	70 15	4 41	Portland	65	0 00	0 00	0.0	0.0	1.00
	Outer coast.										
13	Richmonds Island	43 33	70 14	4 41	Portland	65	−0 04	−0 01	0.0	0.0	1.00
14	Old Orchard Beach	43 31	70 22	4 41	Portland	65	−0 01	−0 04	+0.1	0.0	1.01
15	Wood Island Harbor	43 27	70 21	4 41	Portland	65	+0 01	−0 05	+0.2	0.0	1.02
16	Cape Porpoise	43 22	70 26	4 42	Portland	65	−0 04	−0 01	−0.2	0.0	0.98
	NEW HAMPSHIRE.										
17	Portsmouth Harbor Light	43 04	70 43	4 43	Portland	65	+0 12	+0 07	−0.2	0.0	0.96
18	Portsmouth	43 05	70 45	4 43	Portland	65	+0 21	+0 16	−1.1	0.0	0.88
19	Isles of Shoals Light	42 58	70 37	4 42	Portland	65	+0 09	+0 08	−0.2	0.0	0.98
20	Hampton Harbor	42 54	70 49	4 43	Portland	65	+0 17	+0 41	−1.2	0.0	0.87
	MASSACHUSETTS.										
21	Merrimac River Entrance	42 49	70 49	4 43	Portland	65	+0 21	+0 44	−1.0	0.0	0.89
22	Newburyport, Merrimac River	42 49	70 52	4 43	Portland	65	+0 31	+1 06	−1.1	0.0	0.85
23	Ipswich River Entrance	42 42	70 48	4 43	Portland	65	+0 15	+0 21	−0.2	0.0	0.98
24	Annisquam	42 40	70 41	4 43	Portland	65	+0 09	+0 11	−0.1	0.0	0.99
25	Rockport	42 40	70 37	4 42	Portland	65	+0 03	+0 01	−0.1	0.0	0.99
26	Gloucester	42 37	70 40	4 43	Boston	69	−0 15	−0 22	−0.7	0.0	0.93
27	Salem	42 32	70 53	4 44	Boston	69	−0 12	−0 21	−0.6	0.0	0.94
28	Nahant	42 25	70 54	4 44	Boston	69	−0 13	−0 19	−0.5	0.0	0.95
29	Lynn Harbor	42 27	70 57	4 44	Boston	69	−0 04	−0 12	−0.4	0.0	0.96
30	BOSTON (Navy Yard)	42 22	71 03	4 44	Boston	69	0 00	0 00	0.0	0.0	1.00
31	Boston Light	42 20	70 53	4 44	Boston	69	−0 10	−0 17	−0.6	0.0	0.94
32	Sheppards Ledge, Cohasset Harbor	42 15	70 46	4 43	Boston	69	−0 13	−0 14	−0.6	0.0	0.94
33	Gurnet Lights	42 00	70 36	4 42	Boston	69	−0 10	−0 09	−0.4	0.0	0.96
34	Plymouth	41 57	70 40	4 43	Boston	69	−0 08	+0 02	0.0	0.0	1.00
35	Sandwich	41 46	70 30	4 42	Boston	69	+0 02	0 00	−0.2	0.0	0.98
36	Sandy Neck Light	41 43	70 17	4 41	Boston	69	−0 04	+0 01	−0.2	0.0	0.98
37	Wellfleet, Cape Cod	41 56	70 02	4 40	Boston	69	−0 12	−0 13	+1.1	0.0	1.11
38	Provincetown, Cape Cod	42 03	70 11	4 41	Boston	69	−0 09	−0 13	−0.4	0.0	0.96
39	Race Point, Cape Cod	42 04	70 15	4 41	Boston	69	−0 15	−0 20	−0.6	0.0	0.94
40	Pamet River L. S. S., Cape Cod	42 00	70 01	4 40	Boston	69	−0 02	−0 07	−2.5	0.0	0.74
41	Nauset Harbor, Cape Cod	41 48	69 56	4 40	Boston	69	+0 18	+0 40	−3.6	0.0	0.62
42	Pleasant Bay, Cape Cod	41 44	69 59	4 40	Boston	69	+1 23	+2 08	−6.1	0.0	0.36
43	Chatham Lights, Cape Cod	41 40	69 57	4 40	Boston	69	+0 18	+0 08	−2.9	0.0	0.70
44	Monomoy Point	41 33	70 01	4 40	Boston	69	+0 28	+0 16	−5.9	0.0	0.39
45	Georges Shoal	41 40	67 45	4 31	Boston	69	−1 23	−1 36	−4.7	0.0	0.51
	Nantucket Sound, north side.										
46	Stage Harbor	41 40	69 58	4 40	Newport	73	+4 22	+4 59	+0.4	0.0	1.11
47	Dennisport	41 39	70 07	4 40	Newport	73	+4 12	+4 43	+0.2	0.0	1.06
48	South Yarmouth, Bass River	41 40	70 11	4 41	Newport	73	+4 37	+5 19	−0.6	0.0	0.83
49	Hyannisport	41 38	70 18	4 41	Newport	73	+4 28	+4 38	−0.2	0.0	0.94
50	Succonnesset Point	41 33	70 29	4 42	Old Point Comfort	105	+3 02	+3 02	−0.6	0.0	0.76
51	Monant Hill	41 33	70 33	4 42	Old Point Comfort	105	+2 07	+2 30	−1.3	0.0	0.48
	Nantucket Island.										
52	Great Point	41 23	70 03	4 40	Newport	73	+4 12	+4 34	−0.4	0.0	0.89
53	Wauwinet (outer shore)	41 20	70 00	4 40	Newport	73	+4 37	+5 05	−0.2	0.0	0.94
54	Siasconset	41 16	69 58	4 40	Old Point Comfort	105	+2 25	+2 44	−1.3	0.0	0.48
55	Tom Nevers Head	41 14	69 59	4 40	Old Point Comfort	105	+1 13	+1 03	−1.3	0.0	0.48
56	Forked Pond	41 14	70 02	4 40	Old Point Comfort	105	−0 30	−0 07	−1.1	0.0	0.56

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	11 00	4 48	10 52*a*	4 57*b*	8.8	10.1	7.4	9.6	1.2	1.1	.....	1.6	4.4	4.8	15.5
2	11 08	4 56	11 00*a*	5 05*b*	9.2	10.6	7.7	10.0	1.3	1.1	.....	1.7	4.6	5.0	15.5
3	11 04	4 50	10 56*a*	4 59*b*	8.8	10.1	7.4	9.6	1.2	1.1	.....	1.6	4.4	4.8	15.5
4	11 09	4 51	11 01*a*	5 00*b*	9.0	10.4	7.6	9.8	1.2	1.1	.....	1.6	4.5	4.9	15.5
5	11 05	4 48	10 57*a*	4 57*b*	8.8	10.1	7.4	9.6	1.2	1.1	.....	1.6	4.4	4.8	15.5
6	11 11	4 53	11 08*a*	5 02*b*	9.0	10.3	7.5	9.8	1.2	1.1	.....	1.6	4.5	4.9	15.5
7	11 09	4 52	11 01*a*	5 01*b*	9.0	10.3	7.5	9.8	1.2	1.1	.....	1.6	4.5	4.9	15.5
8	11 10	4 53	11 02*a*	5 02*b*	9.2	10.6	7.7	10.0	1.3	1.1	.....	1.7	4.6	5.0	15.5
9	11 07	4 50	10 59*a*	4 59*b*	9.0	10.4	7.6	9.8	1.2	1.1	.....	1.6	4.5	4.9	15.5
10	11 09	4 52	11 01*a*	5 01*b*	9.0	10.4	7.6	9.8	1.2	1.1	.....	1.6	4.5	4.9	15.5
11	11 02	4 45	10 54*a*	4 54*b*	9.1	10.5	7.7	9.9	1.3	1.1	.....	1.7	4.6	5.0	15.5
12	11 11	4 56	11 03*a*	5 05*b*	8.9	10.2	7.5	9.8	1.2	1.2	8 12	1.7	4.5	4.9	15.5
13	11 07	4 55	11 00*a*	5 04*b*	8.9	10.1	7.5	9.6	1.2	1.0	.....	1.6	4.4	4.7	15.0
14	11 10	4 52	11 03*a*	5 01*b*	9.0	10.3	7.6	9.7	1.2	1.0	.....	1.6	4.5	4.8	15.0
15	11 12	4 51	11 05*a*	5 00*b*	9.1	10.4	7.7	9 8	1.3	1.0	.....	1.7	4.6	4.9	14.5
16	11 06	4 54	10 59*a*	5 03*b*	8.7	9.9	7.4	9.4	1.2	1.0	.....	1.6	4.4	4.7	14.5
17	11 21	5 01	11 18*a*	5 10*b*	8.7	9.9	7.4	9.5	1.2	1.0	.....	1.6	4.4	4.7	14.0
18	11 30	5 10	11 22*a*	5 19*b*	7.8	8.9	6.6	8.5	1.1	0.9	.....	1.4	3.9	4.2	14.0
19	11 19	4 58	11 11*a*	5 07*b*	8.7	9.9	7.4	9.5	1.2	1.0	.....	1.6	4.4	4.7	14.0
20	11 26	5 35	11 18*a*	5 44*b*	7.7	8.8	6.5	8.4	1.1	0.9	.....	1.4	3.8	4.2	13.5
21	11 30	5 38	11 28*a*	5 47*b*	7.9	9.1	6.7	8.6	1.1	0.9	.....	1.4	4.0	4.2	13.5
22	11 40	6 00	11 33*a*	6 09*b*	7.8	8.8	6.6	8.4	1.1	0.9	.....	1.4	3.9	4.2	13.5
23	11 24	5 15	11 17*a*	5 24*b*	8.7	9.9	7.4	9.4	1.2	1.0	.....	1.6	4.4	4.6	13.5
24	11 18	5 05	11 11*a*	5 14*b*	8.8	10.1	7.5	9.5	1.2	1.0	.....	1.6	4.4	4.7	13.5
25	11 13	4 56	11 06*a*	5 05*b*	8.8	10.1	7.5	9.5	1.2	1.0	.....	1.6	4.4	4.7	13.5
26	11 14	4 57	11 08*a*	5 06*b*	8.9	10.1	7.6	9.5	1.2	1.0	.....	1.6	4.4	4.7	13.5
27	11 16	4 57	11 10*a*	5 06*b*	9.0	10.3	7.6	9.5	1.3	1.0	.....	1.6	4.5	4.7	13.5
28	11 15	4 59	11 09*a*	5 08*b*	9.1	10.3	7.7	9.6	1.3	1.0	.....	1.6	4.5	4.7	13.0
29	11 24	5 06	11 18*a*	5 15*b*	9.2	10.4	7.8	9.7	1.3	1.0	.....	1.6	4.6	4.8	13.0
30	11 28	5 18	11 22*a*	5 27*b*	9.6	10.9	8.1	10.1	1.4	1.0	8 56	1.6	4.8	5.0	13.0
31	11 18	5 01	11 12*a*	5 10*b*	9.0	10.3	7.6	9.5	1.3	1.0	.....	1.6	4.5	4.7	13.0
32	11 16	5 05	11 10*a*	5 14*b*	9.0	10.3	7.6	9.5	1.3	1.0	.....	1.6	4.5	4.7	13.0
33	11 20	5 11	11 14*a*	5 20*b*	9.2	10.5	7.8	9.8	1.3	1.0	.....	1.6	4.6	4.8	13.0
34	11 21	5 21	11 15*a*	5 30*b*	9.6	10.9	8.1	10.1	1.3	1.0	.....	1.6	4.8	5.0	13.0
35	11 32	5 20	11 26*a*	5 29*b*	9.4	10.8	8.0	10.0	1.3	1.0	.....	1.6	4.7	4.9	13.0
36	11 27	5 22	11 21*a*	5 31*b*	9.4	10.8	8.0	10.0	1.3	1.0	.....	1.6	4.7	4.9	13.0
37	11 20	5 09	11 14*a*	5 18*b*	10.7	12.2	9.1	11.3	1.4	1.0	.....	1.7	5.4	5.6	13.5
38	11 22	5 08	11 16*a*	5 17*b*	9.2	10.5	7.8	9.8	1.3	1.0	.....	1.6	4.6	4.8	13.5
39	11 16	5 01	11 11*a*	5 11*b*	9.0	10.4	7.6	9.6	1.3	1.0	.....	1.6	4.5	4.7	13.5
40	11 30	5 15	11 25*a*	5 25*b*	7.1	8.3	6.0	7.6	1.1	0.8	.....	1.4	3.6	3.7	13.5
41	11 50	6 02	11 46*a*	6 13*b*	6.0	7.0	4.9	6.4	1.0	0.6	.....	1.2	3.0	3.1	13.5
42	0 30	7 30	0 26*b*	7 41*b*	3.5	4.1	2.9	3.7	0.6	0.4	.....	0.7	1.8	1.8	13.5
43	11 50	5 30	11 46*a*	5 41*b*	6.7	7.9	5.5	7.2	1.1	0.7	.....	1.3	3.4	3.5	13.5
44	12 00	5 38	11 56*a*	5 49*b*	3.7	4.4	3.1	4.0	0.6	0.4	.....	0.7	1.9	2.0	13.0
45	10 18	3 55	10 14*a*	4 06*b*	4.9	5.6	4.0	5.2	0.8	0.5	.....	0.9	2.4	2.5	13.5
46	12 11	5 57	12 11*a*	5 44*b*	3.9	4.7	3.1	4.1	0.7	0.1	.....	0.7	2.0	1.9	13.5
47	12 01	5 41	12 01*a*	5 27*b*	3.7	4.4	3.0	3.9	0.7	0.1	.....	0.7	1.8	1.8	13.5
48	0 00	6 16	0 00*b*	6 02*b*	2.9	3.5	2.3	3.1	0.7	0.1	.....	0.7	1.4	1.4	13.0
49	12 16	5 35	12 16*a*	5 21*b*	3.3	3.9	2.6	3.5	0.7	0.1	.....	0.7	1.6	1.6	13.0
50	12 10	5 41	12 10*a*	5 27*b*	1.9	2.3	1.6	2.2	0.6	0.1	.....	0.6	1.0	1.0	13.0
51	11 15	5 09	11 15*a*	4 55*b*	1.2	1.4	0.9	1.4	0.5	0.1	.....	0.5	0.6	1.6	12.5
52	12 01	5 32	12 00*a*	5 26*b*	3.1	3.7	2.5	3.5	0.7	0.3	.....	0.8	1.6	1.6	13.0
53	0 01	6 03	0 01*b*	5 50*b*	3.3	4.0	2.7	3.6	0.7	0.2	.....	0.7	1.7	1.7	13.0
54	11 35	5 25	11 35*a*	5 09*b*	1.2	1.5	1.0	1.5	0.6	0.1	.....	0.6	0.6	0.6	12.5
55	10 23	3 44	10 23*a*	3 23*b*	1.2	1.4	1.0	1.5	0.6	0.1	.....	0.6	0.6	0.6	12.5
56	8 40	2 34	8 40*a*	2 11*b*	1.4	1.6	1.1	1.6	0.6	0.1	.....	0.6	0.7	0.7	12.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (East Coast)—Continued.										
	MASSACHUSETTS—continued.										
	Nantucket Island—Continued.	*North.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Weweeder	41 14	70 06	4 40	Old Point Comfort	105	−1 02	−0 45	−0.8	0.0	0.68
2	Smith Point, south side	41 17	70 15	4 41	Old Point Comfort	105	−1 13	−0 55	−0.3	0.0	0.88
3	Eel Point	41 17	70 12	4 41	Old Point Comfort	105	+2 34	+2 16	−0.1	0.0	0.96
4	Nantucket Harbor	41 17	70 06	4 40	Old Point Comfort	105	+3 14	+3 12	+0.6	0.0	1.24
5	East Pond, Tuckernuck Island	41 18	70 15	4 41	Old Point Comfort	105	+2 56	+2 52	+0.1	0.0	1.04
6	Life-saving station, Muskeget Island	41 20	70 19	4 41	Old Point Comfort	105	+2 18	+2 37	−0.9	0.0	0.64
	Marthas Vineyard.										
7	Cape Poge Light, Chappaquiddick I.	41 25	70 27	4 42	Old Point Comfort	105	+2 54	+2 27	−0.3	0.0	0.88
8	Life-saving sta., Chappaquiddick I.	41 22	70 27	4 42	Old Point Comfort	105	+2 31	+2 24	−0.9	0.0	0.64
9	Wasque Point, Chappaquiddick I.	41 21	70 27	4 42	Old Point Comfort	105	+0 04	+0 22	−0.9	0.0	0.64
10	Edgartown	41 23	70 31	4 42	Old Point Comfort	105	+3 01	+2 40	−0.5	0.0	0.80
11	Katama Point, Katama Bay	41 21	70 30	4 42	Old Point Comfort	105	+0 22	+1 21	−1.1	0.0	0.56
12	Pahognet	41 21	70 35	4 42	Old Point Comfort	105	−1 16	−1 13	+0.2	0.0	1.08
13	Chilmark Pond	41 20	70 43	4 43	Old Point Comfort	105	−1 33	−1 31	+0.4	0.0	1.16
14	No Mans Land Island	41 16	70 49	4 43	Old Point Comfort	105	−1 35	−1 33	+0.7	0.0	1.28
15	Gay Head Light	41 21	70 50	4 43	Old Point Comfort	105	−1 22	−1 18	+0.5	0.0	1.20
16	Menemsha Bight	41 21	70 47	4 43	Old Point Comfort	105	−1 16	−0 59	+0.5	0.0	1.20
17	Cedar Tree Neck	41 26	70 42	4 43	Old Point Comfort	105	−1 09	−0 28	−0.2	0.0	0.92
18	Chappaquonsett	41 28	70 38	4 43	Old Point Comfort	105	−0 08	+0 37	−0.4	0.0	0.84
19	West Chop Light	41 29	70 36	4 42	Old Point Comfort	105	+2 26	+1 54	−0.9	0.0	0.64
20	Vineyard Haven	41 28	70 36	4 42	Old Point Comfort	105	+2 35	+2 24	−0.8	0.0	0.68
21	East Chop Light	41 28	70 34	4 42	Old Point Comfort	105	+2 37	+2 21	−0.8	0.0	0.68
22	Cottage City	41 27	70 33	4 42	Old Point Comfort	105	+2 52	+2 38	−0.6	0.0	0.76
	Vineyard Sound, north side.										
23	Falmouth	41 32	70 37	4 42	Old Point Comfort	105	+1 16	+2 03	−1.2	0.0	0.52
24	Nobska Point Light	41 31	70 39	4 43	Old Point Comfort	105	−0 35	+0 31	−1.0	0.0	0.60
25	Woods Hole, Fish Comm. Wharf	41 31	70 40	4 43	Old Point Comfort	105	−0 41	+0 20	−0.7	0.0	0.72
26	Tarpaulin Cove	41 28	70 45	4 43	Old Point Comfort	105	−1 08	−0 28	−0.2	0.0	0.92
27	Quicks Hole, south side	41 26	70 51	4 43	Newport	73	−0 08	+0 05	−0.4	0.0	0.89
	Buzzards Bay.										
28	Cuttyhunk Light	41 25	70 57	4 44	Newport	73	−0 09	+0 05	−0.1	0.0	0.97
29	Penikese Island	41 27	70 55	4 44	Newport	73	−0 08	+0 06	+0.1	0.0	1.03
30	Quicks Hole, north side	41 27	70 50	4 43	Newport	73	−0 08	+0 05	+0.2	0.0	1.06
31	Kettle Cove	41 28	70 47	4 43	Newport	73	−0 02	+0 05	+0.5	0.0	1.14
32	Uncatena I., N. side Woods Hole	41 31	70 42	4 43	Newport	73	+0 13	+0 11	+0.4	0.0	1.11
33	West Falmouth	41 37	70 38	4 43	Newport	73	+0 04	+0 05	+0.6	0.0	1.17
34	Pocasset Harbor	41 41	70 37	4 42	Newport	73	+0 08	+0 05	+0.7	0.0	1.20
35	Back River Harbor	41 44	70 37	4 42	Newport	73	+0 13	+0 06	+0.7	0.0	1.20
36	Wareham River	41 44	70 43	4 43	Newport	73	+0 14	+0 10	+0.6	0.0	1.17
37	Bird Island Light	41 40	70 43	4 43	Newport	73	+0 09	+0 06	+0.7	0.0	1.20
38	Mattapoisett	41 39	70 49	4 43	Newport	73	+0 07	+0 05	+0.6	0.0	1.17
39	Clark Point	41 36	70 54	4 44	Newport	73	+0 06	+0 06	+0.4	0.0	1.11
40	New Bedford	41 38	70 55	4 44	Newport	73	+0 12	+0 11	+0.5	0.0	1.14
41	Dumpling Rock Light	41 32	70 55	4 44	Newport	73	+0 05	+0 06	+0.2	0.0	1.06
42	Westport River Entrance	41 31	71 04	4 44	Newport	73	+0 13	+0 33	−0.4	0.0	0.89
	RHODE ISLAND.										
	Narragansett Bay.										
43	Sakonnet Point Light	41 27	71 12	4 45	Newport	73	−0 04	+0 02	−0.2	0.0	0.94
44	Fogland Point, Sakonnet River	41 34	71 13	4 45	Newport	73	+0 06	+0 07	+0.3	0.0	1.09
45	Beavertail Light	41 27	71 24	4 46	Newport	73	−0 01	−0 02	0.0	0.0	1.00
46	Newport	41 29	71 20	4 45	Newport	73	0 00	0 00	0.0	0.0	1.00
47	Prudence Island Light	41 36	71 18	4 45	Newport	73	+0 11	+0 01	+0.3	0.0	1.09
48	Bristol Ferry Light	41 39	71 16	4 45	Newport	73	+0 15	+0 02	+0.5	0.0	1.14
49	Fall River, Mass	41 42	71 10	4 45	Newport	73	+0 26	+0 07	+1.4	0.0	1.40
50	Bristol	41 40	71 16	4 45	Newport	73	+0 18	+0 03	+0.6	0.0	1.17
51	Warren	41 44	71 17	4 45	Newport	73	+0 22	+0 07	+1.1	0.0	1.31
52	Nayat Point	41 43	71 21	4 45	Newport	73	+0 21	+0 05	+1.1	0.0	1.31
53	Providence	41 49	71 24	4 46	Newport	73	+0 29	+0 12	+1.1	0.0	1.31
54	East Greenwich	41 40	71 27	4 46	Newport	73	+0 17	+0 03	+0.9	0.0	1.26
55	Wickford	41 34	71 27	4 46	Newport	73	+0 07	+0 03	+0.6	0.0	1.17
56	Narragansett Pier	41 26	71 27	4 46	Newport	73	−0 01	+0 03	0.0	0.0	1.00

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	8 08	1 56	8 08*a*	1 39*b*	1.7	2.0	1.3	1.9	0.6	0.1	.....	0.6	0.8	0.8	12.5
2	7 56	1 45	7 56*a*	1 28*b*	2.2	2.7	1.8	2.5	0.6	0.1	.....	0.6	1.1	1.1	12.5
3	11 43	4 56	11 43*a*	4 40*b*	2.4	2.9	1.9	2.7	0.7	0.1	.....	0.7	1.2	1.2	12.5
4	12 24	5 53	11 24*a*	5 40*b*	3.1	3.7	2.4	3.3	0.7	0.1	.....	0.7	1.5	1.5	12.5
5	12 05	5 32	12 05*a*	5 15*b*	2.6	3.2	2.1	2.9	0.7	0.1	.....	0.7	1.3	1.3	12.5
6	11 27	5 17	11 27*a*	5 00*b*	1.6	1.9	1.3	1.9	0.6	0.1	.....	0.6	0.8	0.8	12.5
7	12 02	5 06	12 02*a*	4 53*b*	2.2	2.7	1.8	2.5	0.6	0.1	.....	0.6	1.1	1.1	12.5
8	11 39	5 03	11 39*a*	4 50*b*	1.6	1.9	1.3	1.9	0.6	0.1	.....	0.6	0.8	0.8	12.5
9	9 12	3 01	9 12*a*	2 48*b*	1.6	2.0	1.3	1.9	0.6	0.1	.....	0.6	0.8	0.8	12.5
10	12 09	5 19	12 09*a*	5 02*b*	2.0	2.4	1.6	2.3	0.6	0.1	.....	0.6	1.0	1.0	12.0
11	9 30	4 00	9 30*a*	3 43*b*	1.4	1.7	1.1	1.7	0.6	0.1	.....	0.6	0.7	0.7	12.0
12	7 52	1 26	7 52*a*	1 10*b*	2.7	3.2	2.1	2.9	0.6	0.1	.....	0.6	1.3	1.3	12.0
13	7 34	1 07	7 34*a*	0 52*b*	2.9	3.5	2.3	3.1	0.6	0.1	.....	0.6	1.4	1.4	12.0
14	7 32	1 05	7 32*a*	0 50*b*	3.2	3.8	2.6	3.4	0.7	0.1	.....	0.7	1.6	1.6	12.0
15	7 45	1 20	7 45*a*	1 06*b*	3.0	3.6	2.4	3.2	0.7	0.1	.....	0.7	1.5	1.4	12.0
16	7 51	1 39	7 51*a*	1 25*b*	3.0	3.6	2.4	3.2	0.7	0.1	.....	0.7	1.5	1.4	12.0
17	7 58	2 10	7 58*a*	1 56*b*	2.3	2.8	1.9	2.6	0.6	0.1	.....	0.6	1.2	1.2	12.5
18	8 59	3 15	8 59*a*	2 59*b*	2.1	2.5	1.7	2.3	0.6	0.1	.....	0.6	1.0	1.0	12.5
19	11 34	4 33	11 34*a*	4 17*b*	1.6	1.9	1.3	1.8	0.5	0.1	.....	0.5	0.8	0.8	12.5
20	11 43	5 03	11 43*a*	4 45*b*	1.7	2.0	1.4	1.9	0.5	0.1	.....	0.5	0.8	0.8	12.5
21	11 45	5 00	11 45*a*	4 42*b*	1.7	2.0	1.4	1.9	0.5	0.1	.....	0.5	0.8	0.8	12.5
22	12 00	5 17	12 00*a*	5 00*b*	1.9	2.3	1.6	2.1	0.5	0.1	.....	0.5	1.0	1.0	12.5
23	10 24	4 42	10 24*a*	4 28*b*	1.3	1.6	1.1	1.6	0.5	0.1	.....	0.5	0.7	0.7	12.5
24	8 32	3 09	8 32*a*	2 55*b*	1.5	1.8	1.2	1.8	0.5	0.1	.....	0.5	0.8	0.8	12.5
25	8 26	2 58	8 26*a*	2 44*b*	1.8	2.1	1.4	2.0	0.6	0.1	.....	0.6	0.9	0.9	12.5
26	7 59	2 10	7 59*a*	1 56*b*	2.3	2.8	1.9	2.6	0.6	0.1	.....	0.6	1.2	1.2	12.0
27	7 38	1 00	7 38*a*	0 46*a*	3.1	3.8	2.5	3.4	0.7	0.1	.....	0.7	1.6	1.6	12.0
28	7 36	0 59	7 36*a*	0 45*a*	3.4	4.1	2.7	3.7	0.8	0.1	.....	0.8	1.7	1.7	12.0
29	7 37	1 00	7 37*a*	0 46*a*	3.6	4.3	2.9	3.9	0.8	0.1	.....	0.8	1.8	1.8	12.0
30	7 38	1 00	7 38*a*	0 46*a*	3.7	4.5	3.0	4.0	0.8	0.1	.....	0.8	1.9	1.8	12.0
31	7 44	1 00	7 44*a*	0 46*a*	4.0	4.8	3.2	4.3	0.8	0.1	.....	0.8	2.0	2.0	12.0
32	7 59	1 06	7 59*a*	0 53*a*	3.9	4.7	3.1	4.2	0.8	0.1	.....	0.8	2.0	1.9	12.5
33	7 50	1 00	7 50*a*	0 46*a*	4.1	4.9	3.3	4.3	0.8	0.1	.....	0.8	2.0	2.0	12.5
34	7 55	1 01	7 55*a*	0 47*a*	4.2	5.0	3.3	4.4	0.8	0.1	.....	0.8	2.1	2.0	12.5
35	8 00	1 02	8 00*a*	0 48*a*	4.2	5.0	3.3	4.4	0.8	0.1	.....	0.8	2.1	2.0	12.5
36	8 00	1 05	8 00*a*	0 52*a*	4.1	4.9	3.2	4.3	0.8	0.1	.....	0.8	2.0	2.0	12.5
37	7 56	1 01	7 55*a*	0 48*a*	4.2	5.0	3.3	4.4	0.8	0.1	.....	0.8	2.1	2.0	12.5
38	7 53	1 00	7 53*a*	0 47*a*	4.1	5.0	3.2	4.4	0.8	0.1	.....	0.8	2.1	2.0	12.5
39	7 51	1 00	7 51*a*	0 47*a*	3.9	4.6	3.0	4.1	0.8	0.1	.....	0.8	1.9	1.9	12.5
40	7 57	1 05	7 57*a*	0 52*a*	4.0	4.8	3.1	4.2	0.8	0.1	.....	0.8	2.0	1.9	12.5
41	7 50	1 00	7 50*a*	0 47*a*	3.7	4.5	2.8	4.0	0.8	0.1	.....	0.8	1.9	1.8	12.5
42	7 58	1 27	7 58*a*	1 13*a*	3.1	3.7	2.3	3.3	0.7	0.1	.....	0.7	1.6	1.5	12.5
43	7 40	0 55	7 40*a*	0 41*a*	3.3	4.0	2.4	3.5	0.7	0.1	.....	0.7	1.6	1.6	12.5
44	7 50	1 00	7 50*a*	0 46*a*	3.8	4.6	2.8	4.1	0.8	0.1	.....	0.8	1.9	1.9	12.5
45	7 42	0 50	7 42*a*	0 36*a*	3.5	4.3	2.5	3.8	0.8	0.1	.....	0.8	1.8	1.7	12.5
46	7 44	0 53	7 44*a*	0 39*a*	3.5	4.3	2.5	3.8	0.8	0.1	7 31	0.8	1.7	1.7	12.5
47	7 55	0 54	7 55*a*	0 40*a*	3.8	4.7	2.8	4.1	0.8	0.1	.....	0.8	1.9	1.9	12.5
48	8 00	0 55	8 00*a*	0 42*a*	4.0	4.8	3.0	4.3	0.8	0.2	.....	0.8	2.0	2.0	12.5
49	8 10	1 00	8 11*a*	0 48*a*	4.9	5.9	3.7	5.2	0.8	0.2	.....	0.8	2.4	2.4	12.5
50	8 02	0 56	8 02*a*	0 44*a*	4.1	5.0	3.1	4.4	0.8	0.2	7 46	0.8	2.1	2.0	12.5
51	8 06	1 00	8 05*a*	0 48*a*	4.6	5.5	3.5	4.9	0.8	0.2	.....	0.8	2.3	2.3	12.5
52	8 05	0 58	8 04*a*	0 46*a*	4.6	5.5	3.5	4.9	0.8	0.2	.....	0.8	2.3	2.3	12.5
53	8 12	1 04	8 11*a*	0 52*a*	4.6	5.6	3.5	4.9	0.8	0.2	7 28	0.8	2.3	2.3	12.5
54	8 00	0 55	8 00*a*	0 43*a*	4.4	5.3	3.4	4.7	0.8	0.2	.....	0.8	2.2	2.2	12.5
55	7 50	0 55	7 50*a*	0 42*a*	4.1	4.9	3.2	4.4	0.8	0.2	.....	0.8	2.0	2.0	12.5
56	7 42	0 55	7 42*a*	0 41*a*	3.5	4.2	2.8	3.8	0.8	0.2	.....	0.8	1.8	1.8	12.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST)—Continued.										
	RHODE ISLAND—continued.										
	Outer coast.	*North.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Point Judith Light	41 22	71 29	4 46	Newport	73	+0·02	+0 18	−0.4	0.0	0.89
2	Block Island, Basin Harbor	41 10	71 33	4 46	Newport	73	−0 10	+0 17	−0.5	0.0	0.86
3	Watch Hill Light	41 18	71 52	4 47	New London	77	−0 38	−0 53	+0.2	0.0	1.08
	CONNECTICUT.										
	Long Island Sound, north side.										
4	Stonington	41 20	71 54	4 48	New London	77	−0 27	−0 38	+0.2	0.0	1.08
5	Noank, Mystic River Entrance	41 19	71 59	4 48	New London	77	−0 21	−0 30	+0.1	0.0	1.04
6	NEW LONDON, Custom-House Whf.	41 21	72 06	4 48	New London	77	0 00	0 00	0.0	0.0	1.00
7	New London Naval Station	41 24	72 06	4 48	New London	77	+0 04	+0 12	0.0	0.0	1.00
8	Norwich, Thames River	41 32	72 05	4 48	New London	77	+0 41	+0 47	+0.6	0.0	1.24
9	Millstone Point	41 18	72 10	4 49	New London	77	+0 14	+0 04	+0.2	0.0	1.08
10	Saybrook Light, Connecticut Riv.	41 16	72 21	4 49	New London	77	+1 04	+0 42	+1.1	0.0	1.44
11	Lyme Ferry, Connecticut River	41 18	72 20	4 49	New London	77	+1 22	+1 09	+0.7	0.0	1.28
12	Essex, Connecticut River	41 21	72 23	4 50	New London	77	+1 48	+1 51	+0.4	0.0	1.16
13	Chester, Connecticut River	41 24	72 26	4 50	New London	77	+2 16	+2 30	0.0	0.0	1.00
14	East Haddam, Connecticut River	41 27	72 28	4 50	New London	77	+2 39	+3 00	−0.3	0.0	0.88
15	Higganum, Connecticut River	41 30	72 33	4 50	New London	77	+3 14	+4 01	−0.6	0.0	0.76
16	Middletown, Connecticut River	41 34	72 39	4 51	New London	77	+4 05	+5 03	−1.0	0.0	0.60
17	South Glastonbury, Conn. River	41 40	72 37	4 50	New London	77	+4 54	+6 12	−1.4	0.0	0.44
18	Wethersfield, Connecticut River	41 43	72 39	4 51	New London	77	+5 31	+7 07	−1.6	0.0	0.36
19	Hartford, Connecticut River	41 46	72 40	4 51	New London	77	+5 52	+7 38	−1.7	0.0	0.32
20	Duck Island	41 16	72 28	4 50	Willets Point	81	−0 28	−0 56	−2.7	0.0	0.62
21	Falkner Island Light	41 13	72 39	4 51	Willets Point	81	−0 16	−0 46	−1.8	0.0	0.75
22	Money Island, Thimble Islands	41 15	72 45	4 51	Willets Point	81	−0 14	−0 44	−1.6	0.0	0.78
23	Branford Harbor	41 16	72 49	4 51	Willets Point	81	−0 11	−0 40	−1.3	0.0	0.82
24	Southwest Ledge Light	41 14	72 55	4 52	Willets Point	81	−0 11	−0 35	−1.0	0.0	0.86
25	New Haven	41 18	72 55	4 52	Willets Point	81	−0 04	- 0 31	−1.2	0.0	0.83
26	Milford Roads	41 12	73 02	4 52	Willets Point	81	−0 10	−0 31	−0.6	0.0	0.92
27	Bridgeport	41 10	73 11	4 53	Willets Point	81	−0 02	−0 20	0.0	0.0	1.00
28	Black Rock Harbor Light	41 09	73 13	4 53	Willets Point	81	−0 06	−0 24	−0.3	0.0	0.96
29	Saugatuck, Saugatuck River	41 06	73 21	4 53	Willets Point	81	−0 06	−0 21	−0.2	0.0	0.97
30	Westport, Saugatuck River	41 09	73 22	4 53	Willets Point	81	+0 08	−0 10	−0.1	0.0	0.99
31	South Norwalk	41 06	73 25	4 54	Willets Point	81	−0 04	−0 20	−0.2	0.0	0.97
32	Greens Ledge Light	41 03	73 27	4 54	Willets Point	81	−0 04	−0 22	+0.1	0.0	1.01
33	Stamford	41 02	73 33	4 54	Willets Point	81	−0 03	−0 21	+0.1	0.0	1.01
34	Greenwich	41 02	73 35	4 54	Willets Point	81	−0 02	−0 21	+0.2	0.0	1.03
35	Great Captain Island Light	40 59	73 37	4 54	Willets Point	81	−0 03	−0 21	+0.1	0.0	1.01
	NEW YORK.										
	Long Island Sound, north side.										
36	Port Chester	41 00	73 40	4 55	Willets Point	81	0 00	−0 17	+0.1	0.0	1.01
37	Mamaroneck	40 56	73 44	4 55	Willets Point	81	0 00	−0 16	+0.1	0.0	1.01
38	New Rochelle	40 54	73 46	4 55	Willets Point	81	+0 04	−0 12	+0.4	0.0	1.06
39	City Island	40 51	73 47	4 55	Willets Point	81	0 00	−0 08	0.0	0.0	1.00
40	Throgs Neck	40 48	73 47	4 55	Willets Point	81	0 00	0 00	0.0	0.0	1.00
	East River.										
41	Whitestone Point	40 48	73 49	4 55	Willets Point	81	+0 09	+0 08	0.0	0.0	1.00
42	College Point	40 48	73 51	4 55	Willets Point	81	+0 20	+0 16	−0.1	0.0	0.99
43	Flushing, Flushing Bay	40 46	73 51	4 55	Willets Point	81	+0 31	+0 33	−0.5	0.0	0.93
44	Hunts Point	40 48	73 52	4 55	Willets Point	81	+0 23	+0 18	−0.1	0.0	0.99
45	North Brother Light	40 48	73 54	4 56	Willets Point	81	+0 22	+0 15	−0.3	0.0	0.96
46	Lawrence Point	40 47	73 55	4 56	Willets Point	81	+0 16	+0 07	−0.6	0.0	0.92
47	Polhemus Dock	40 47	73 55	4 56	Willets Point	81	+0 14	0 00	−0.8	0.0	0.89
48	Pot Cove, Astoria	40 47	73 56	4 56	Willets Point	81	−0 03	−0 21	−1.2	0.0	0.83
49	Hallets Point Light, Hell Gate	40 47	73 56	4 56	New York	85	+2 41	+2 25	+1.1	0.0	1.25
50	Hell Gate Ferry, Astoria	40 46	73 56	4 56	New York	85	+2 06	+1 41	+0.7	0.0	1.16
51	Blackwells Island Light	40 46	73 56	4 56	New York	85	+2 01	+1 38	+0.6	0.0	1.14
52	East 41st street, New York City	40 45	73 58	4 56	New York	85	+1 26	+1 15	−0.3	0.0	0.93
53	East 27th street, Bellevue Hospital	40 44	73 58	4 56	New York	85	+1 16	+1 07	−0.4	0.0	0.91
54	Brooklyn Navy-Yard	40 42	73 59	4 56	New York	85	+0 40	+0 37	−0.4	0.0	0.91
55	Brooklyn Bridge	40 42	74 00	4 56	New York	85	+0 20	+0 23	−0.2	0.0	0.95

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	7 45	1 10	7 44*a*	0 55*a*	3.1	3.8	2.5	3.5	0.8	0.2	.....	0.8	1.6	1.6	12.0
2	7 33	1 09	7 32*a*	0 50*a*	3.0	3.6	2.4	3.3	0.8	0.2	.....	0.8	1.5	1.5	11.5
3	8 49	2 38	8 45*a*	2 58*b*	2.7	3.3	2.2	3.2	0.9	0.2	.....	0.9	1.4	1.4	11.0
4	8 59	2 52	8 54*a*	3 12*b*	2.7	3.2	2.2	3.1	0.9	0.2	.....	0.9	1.4	1.5	11.0
5	9 05	3 00	9 00*a*	3 20*b*	2.6	3.0	2.0	2.9	0.9	0.2	.....	0.9	1.3	1.4	11.0
6	9 26	3 30	9 21*a*	3 51*b*	2.5	2.9	2.0	2.8	0.9	0.2	8 31	0.9	1.2	1.3	11.0
7	9 30	3 42	9 27*a*	4 01*b*	2.5	2.9	2.0	2.8	0.9	0.2	8 27	0.9	1.3	1.3	11.0
8	10 07	4 17	10 08*a*	4 37*b*	3.1	3.7	2.5	3.5	0.9	0.2	.....	0.9	1.6	1.7	11.0
9	9 39	3 33	9 34*a*	3 53*b*	2.7	3.2	2.2	3.1	0.9	0.2	.....	0.9	1.4	1.5	11.0
10	10 29	4 11	10 25*a*	4 30*b*	3.6	4.3	2.9	4.1	0.9	0.3	.....	0.9	1.8	1.9	11.0
11	10 47	4 38	10 43*a*	4 58*b*	3.2	3.8	2.6	3.7	0.9	0.3	.....	0.9	1.6	1.7	11.0
12	11 12	5 19	11 08*a*	5 40*b*	2.9	3.4	2.3	3.3	0.9	0.2	.....	0.9	1.4	1.5	11.0
13	11 40	5 58	11 36*a*	6 20*b*	2.5	2.9	2.0	2.8	0.9	0.2	.....	0.9	1.2	1.3	11.0
14	12 03	6 28	11 58*a*	6 50*b*	2.2	2.6	1.8	2.6	0.8	0.2	.....	0.8	1.1	1.2	11.0
15	0 13	7 29	0 08*b*	7 51*b*	1.9	2.2	1.5	2.2	0.8	0.2	.....	0.8	1.0	1.1	11.0
16	1 03	8 30	0 57*b*	8 52*b*	1.5	1.7	1.2	1.7	0.7	0.1	.....	0.7	0.7	0.7	11.0
17	1 53	9 40	1 46*b*	10 02*b*	1.1	1.3	0.9	1.3	0.6	0.1	.....	0.6	0.6	0.6	11.0
18	2 29	10 34	2 22*b*	10 57*b*	0.9	1.1	0.7	1.0	0.5	0.1	.....	0.5	0.4	0.4	11.0
19	2 50	11 05	2 42*b*	11 28*b*	0.8	0.9	0.6	0.9	0.5	0.1	.....	0.5	0.4	0.4	11.0
20	10 46	4 31	10 42*a*	4 39*b*	4.5	5.3	3.6	5.1	0.9	0.4	.....	1.0	2.2	2.4	11.0
21	10 57	4 40	10 53*a*	4 48*b*	5.4	6.3	4.3	6.1	1.0	0.4	.....	1.1	2.7	2.9	10.5
22	10 59	4 42	10 55*a*	4 50*b*	5.6	6.7	4.5	6.4	1.0	0.5	.....	1.1	2.8	3.0	10.5
23	11 02	4 46	10 58*a*	4 54*b*	5.9	7.0	4.7	6.7	1.0	0.5	.....	1.1	3.0	3.2	10.5
24	11 01	4 50	10 57*a*	4 58*b*	6.2	7.3	5.0	7.1	1.0	0.5	.....	1.1	3.1	3.3	10.5
25	11 08	4 54	11 04*a*	5 02*b*	6.0	7.1	4.8	6.8	1.0	0.5	.....	1.1	3.0	3.2	10.5
26	11 02	4 54	10 58*a*	5 02*b*	6.6	7.7	5.2	7.5	1.0	0.5	.....	1.1	3.3	3.5	10.5
27	11 09	5 04	11 05*a*	5 12*b*	7.2	8.5	5.8	8.2	1.0	0.6	.....	1.1	3.6	3.9	10.5
28	11 05	5 00	11 01*a*	5 08*b*	6.9	8.2	5.5	7.9	1.0	0.6	.....	1.1	3.5	3.8	10.5
29	11 06	5 03	11 02*a*	5 10*b*	7.0	8.3	5.6	8.0	1.0	0.6	.....	1.1	3.5	3.8	10.0
30	11 19	5 14	11 16*a*	5 21*b*	7.1	8.4	5.7	8.1	1.0	0.6	.....	1.1	3.6	3.9	10.0
31	11 06	5 03	11 02*a*	5 11*b*	7.0	8.3	5.6	8.0	1.0	0.6	.....	1.1	3.5	3.8	10.0
32	11 08	5 01	11 02*a*	5 09*b*	7.3	8.6	5.8	8.3	1.0	0.6	.....	1.1	3.6	3.9	10.0
33	11 07	5 02	11 03*a*	5 09*b*	7.3	8.6	5.8	8.3	1.0	0.6	.....	1.1	3.6	3.9	10.0
34	11 08	5 02	11 04*a*	5 10*b*	7.4	8.7	5.9	8.4	1.0	0.6	.....	1.1	3.7	4.0	10.0
35	11 07	5 02	11 03*a*	5 10*b*	7.3	8.6	5.9	8.3	1.0	0.6	.....	1.1	3.7	4.0	10.0
36	11 09	5 05	11 05*a*	5 13*b*	7.3	8.6	5.8	8.3	1.0	0.6	.....	1.1	3.7	4.0	10.0
37	11 09	5 06	11 05*a*	5 14*b*	7.3	8.6	5.8	8.3	1.0	0.6	.....	1.1	3.6	3.9	10.0
38	11 13	5 10	11 09*a*	5 18*b*	7.6	8.9	6.0	8.6	1.0	0.6	.....	1.1	3.8	4.1	10.0
39	11 09	5 14	11 05*a*	5 22*b*	7.2	8.5	5.7	8.3	1.0	0.6	.....	1.1	3.6	3.9	10.0
40	11 09	5 22	11 05*a*	5 30*b*	7.2	8.5	5.7	8.2	1.0	0.6	.....	1.1	3.6	3.9	10.0
41	11 18	5 30	11 14*a*	5 38*b*	7.2	8.5	5.6	8.1	1.0	0.5	.....	1.1	3.6	3.8	9.5
42	11 29	5 38	11 25*a*	5 46*b*	7.1	8.5	5.6	8.1	1.0	0.5	.....	1.1	3.6	3.8	9.5
43	11 40	5 55	11 36*a*	6 04*b*	6.7	8.0	5.2	7.6	1.0	0.5	.....	1.1	3.4	3.6	9.5
44	11 32	5 40	11 28*a*	5 49*b*	7.1	8.4	5.5	8.0	1.0	0.5	.....	1.1	3.5	3.7	9.5
45	11 30	5 36	11 26*a*	5 46*b*	6.9	8.2	5.4	7.8	1.0	0.5	.....	1.1	3.4	3.6	9.5
46	11 24	5 28	11 20*a*	5 38*b*	6.6	7.9	5.1	7.5	1.0	0.5	.....	1.1	3.3	3.5	9.5
47	11 22	5 21	11 18*a*	5 31*b*	6.4	7.6	5.0	7.2	1.0	0.4	.....	1.1	3.2	3.4	9.5
48	11 05	5 00	11 01*a*	5 10*b*	6.0	7.2	4.7	6.8	1.0	0.4	.....	1.1	3.0	3.2	9.5
49	10 45	4 30	10 42*a*	4 41*b*	5.5	6.6	4.3	6.2	1.0	0.4	.....	1.1	2.8	3.0	9.5
50	10 10	3 46	10 07*a*	3 57*b*	5.1	6.1	4.0	5.8	1.0	0.4	.....	1.1	2.6	2.8	9.5
51	10 05	3 43	10 02*a*	3 54*b*	5.0	6.0	3.9	5.7	1.0	0.4	.....	1.1	2.5	2.7	9.5
52	9 30	3 20	9 27*a*	3 32*b*	4.1	4.9	3.2	4.7	1.0	0.3	.....	1.0	2.1	2.2	9.5
53	9 20	3 12	9 17*a*	3 24*b*	4.0	4.8	3.1	4.5	1.0	0.3	.....	1.0	2.0	2.1	9.5
54	8 44	2 42	8 41*a*	2 54*b*	4.0	4.7	3.1	4.5	1.0	0.3	.....	1.0	2.0	2.1	9.5
55	8 24	2 28	8 21*a*	2 41*b*	4.2	5.0	3.3	4.7	1.0	0.3	.....	1.0	2.1	2.2	9.5

Number.	Station.	Geographic position. Latitude.	Geographic position. Longitude. Arc.	Geographic position. Longitude. Time.	Standard port for reference. Name.	Standard port for reference. Page.	Tidal differences. Time. HW.	Tidal differences. Time. LW.	Tidal differences. Height. HW.	Tidal differences. Height. LW.	Ratio of ranges.
	NORTH AMERICA (EAST COAST)—Continued.										
	NEW YORK—continued.										
	Harlem River.	*North.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	East 110th street, New York City	40 47	73 56	4 56	New York	85	+2 11	+1 45	+1.6	0.0	1.25
2	High Bridge	40 51	73 56	4 56	New York	85	+2 21	+2 05	+1.6	0.0	1.36
3	Kings Bridge	40 52	73 55	4 56	New York	86	+0 56	+1 00	−0.1	0.0	0.98
	Long Island Sound, south side.										
4	WILLETS POINT	40 48	73 47	4 55	Willets Point	81	0 00	0 00	0.0	0.0	1.00
5	Hewletts Point	40 50	73 45	4 55	Willets Point	81	0 00	−0 06	0.0	0.0	1.00
6	Execution Rocks Light	40 53	73 44	4 55	Willets Point	81	0 00	−0 13	+0.1	0.0	1.01
7	Glen or Mosquito Cove, Hempstead H.	40 51	73 39	4 55	Willets Point	81	0 00	−0 16	0.0	0.0	1.00
8	Oyster Bay	40 52	73 31	4 54	Willets Point	81	−0 03	−0 17	+0.1	0.0	1.01
9	Cold Spring Harbor, Oyster Bay	40 52	73 28	4 54	Willets Point	81	−0 02	−0 16	+0.4	0.0	1.06
10	Huntington Harbor	40 54	73 26	4 54	Willets Point	81	−0 04	−0 24	+0.4	0.0	1.06
11	Northport Harbor	40 54	73 21	4 53	Willets Point	81	−0 04	−0 24	+0.1	0.0	1.01
12	Nissequogue River	40 54	73 13	4 53	Willets Point	81	−0 06	−0 25	−0.2	0.0	0.97
13	Stony Brook	40 55	73 09	4 53	Willets Point	81	+0 14	−0 04	−1.1	0.0	0.85
14	Stratford Shoal Light	41 04	73 06	4 52	Willets Point	81	−0 09	−0 29	−0.6	0.0	0.92
15	Port Jefferson Entrance	40 58	73 05	4 52	Willets Point	81	−0 06	−0 25	−1.0	0.0	0.86
16	Port Jefferson	40 57	73 04	4 52	Willets Point	81	+0 29	+0 21	−0.6	0.0	0.92
17	Setauket	40 56	73 06	4 52	Willets Point	81	+0 58	+0 59	−0.7	0.0	0.90
18	Conscience Bay	40 57	73 07	4 52	Willets Point	81	+1 08	+1 35	−2.2	0.0	0.69
19	Herod Point	40 57	72 50	4 51	Willets Point	81	−0 11	−0 36	−1.3	0.0	0.82
20	Jacob Point	40 59	72 39	4 51	Willets Point	81	−0 13	−0 42	−2.3	0.0	0.68
21	Duck Pond Point	41 02	72 31	4 50	Willets Point	81	−0 17	−0 48	−2.7	0.0	0.62
22	Horton Point Light	41 05	72 27	4 50	New London	77	+1 27	+1 05	+1.5	0.0	1.60
23	Truman Beach	41 08	72 19	4 49	New London	77	+1 05	+0 48	+0.9	0.0	1.36
24	Orient Point	41 10	72 14	4 49	New London	77	+0 35	+0 12	+0.2	0.0	1.08
25	Little Gull Island Light	41 12	72 06	4 48	New London	77	0 00	−0 26	0.0	0.0	1.00
26	West Harbor, Fishers Island	41 16	72 00	4 48	New London	77	+0 05	−0 03	0.0	0.0	1.00
27	Gardiners Point Light	41 09	72 09	4 49	New London	77	+0 25	+0 06	+0.2	0.0	1.08
28	Orient Harbor	41 08	72 18	4 49	New London	77	+0 55	+0 33	0.0	0.0	1.00
29	Greenport	41 06	72 21	4 49	New London	77	+0 59	+0 43	−0.1	0.0	0.96
30	Southold Landing	41 04	72 25	4 50	New London	77	+1 48	+1 32	0.0	0.0	1.00
31	Cutchogue Harbor	41 00	72 27	4 50	New London	77	+2 01	+1 48	−0.2	0.0	0.92
32	Jamesport	40 56	72 34	4 50	New London	77	+2 47	+2 42	−0.1	0.0	0.96
33	Sag Harbor	41 00	72 17	4 49	New London	77	+1 05	+0 51	0.0	0.0	1.00
34	Cedar Island Light	41 02	72 16	4 49	New London	77	+0 42	+0 31	+0.1	0.0	1.04
35	Acabonack Harbor	41 01	72 08	4 49	New London	77	0 00	−0 08	+0.2	0.0	1.08
36	Napeague Harbor	41 00	72 03	4 48	New London	77	−0 11	−0 25	0.0	0.0	1.00
37	Fort Pond Bay	41 03	71 58	4 48	New London	77	−0 36	−0 50	−0.3	0.0	0.88
38	Montauk Point Light	41 04	71 51	4 47	New London	77	−1 07	−1 28	−0.5	0.0	0.80
	Long Island, south side.										
39	Amagansett Life-Saving Station	40 58	72 07	4 48	New London	77	−1 16	−1 38	−0.3	0.0	0.80
40	Mecox Life-Saving Station	40 54	72 18	4 49	New London	77	−1 25	−1 44	−0.2	0.0	0.92
41	Southampton Life-Saving Station	40 52	72 23	4 50	New London	77	−1 30	−1 47	−0.1	0.0	0.96
42	Shinnecock Life-Saving Station	40 51	72 28	4 50	New London	77	−1 36	−1 50	0.0	0.0	1.00
43	Quogue Life-Saving Station	40 48	72 36	4 50	New London	77	−1 42	−1 54	+0.2	0.0	1.08
44	Moriches Life-Saving Station	40 46	72 43	4 51	New London	77	−1 47	−1 57	+0.4	0.0	1.16
45	Bellport Life-Saving Station	40 43	72 56	4 52	New London	77	−1 52	−2 01	+0.6	0.0	1.24
46	Bellport, Great South Bay	40 45	72 56	4 52	New London	77	+1 33	+1 24	−1.4	0.0	0.44
47	Patchogue, Great South Bay	40 45	73 01	4 52	New London	77	+1 16	+1 07	−1.5	0.0	0.40
48	Lone Hill Life-Saving Station	40 40	73 04	4 52	New London	77	−1 57	−2 04	+0.8	0.0	1.32
49	Fire Island Inlet, Great South Bay	40 38	73 14	4 53	New London	77	−2 02	−2 05	−0.5	0.0	0.80
50	Babylon, Great South Bay	40 41	73 19	4 53	New London	77	+0 29	+0 25	−1.3	0.0	0.48
51	Gilgo Inlet, Great South Bay	40 37	73 25	4 54	Sandy Hook	89	−0 12	−0 09	−1.1	0.0	0.77
52	Jones Inlet, Hempstead Bay	40 36	73 32	4 54	Sandy Hook	89	−0 07	−0 04	−0.9	0.0	0.81
53	E. Rockaway Inlet, Hempstead Bay	40 36	73 41	4 55	Sandy Hook	89	0 00	+0 01	−0.6	0.0	0.87
54	Barren Island, Rockaway Inlet	40 35	73 53	4 56	Sandy Hook	89	+0 07	+0 12	−0.4	0.0	0.91
55	Holland Landing, Jamaica Bay	40 35	73 49	4 55	Sandy Hook	89	+0 42	+0 32	−0.4	0.0	0.91
56	Norton Point, Jamaica Bay	40 38	73 45	4 55	Sandy Hook	89	+1 09	+1 20	−0.7	0.0	0.85
57	Canarsie, Jamaica Bay	40 38	73 53	4 56	Sandy Hook	89	+0 45	+0 48	−0.2	0.0	0.96
58	Coney Island	40 34	73 59	4 56	Sandy Hook	89	0 00	−0 12	0.0	0.0	1.00
	Staten Island.										
59	Elm Tree Beacon	40 34	74 06	4 56	Sandy Hook	89	+0 03	+0 08	+0.2	0.0	1.04
60	Great Kills	40 32	74 08	4 57	Sandy Hook	89	+0 02	+0 06	+0.4	0.0	1.09
61	Princess Bay Light	40 30	74 13	4 57	Sandy Hook	89	+0 05	+0 09	+0.6	0.0	1.13
62	Great Beds Light	40 29	74 15	4 57	Sandy Hook	89	+0 07	+0 13	+0.6	0.0	1.13
63	Tottenville, Arthur Kill	40 31	74 15	4 57	Sandy Hook	89	+0 11	+0 22	+0.6	0.0	1.13

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	10 15	3 50	10 12*a*	4 03*b*	5.5	6.6	4.3	6.2	1.0	0.3	.....	1.0	2.8	2.9	9.5
2	10 25	4 10	10 22*a*	4 23*b*	6.0	7.2	4.6	6.7	1.0	0.3	.....	1.0	3.0	3.1	9.5
3	9 00	3 05	8 57*a*	3 18*b*	4.3	5.2	3.4	4.8	1.0	0.3	.....	1.0	2.2	2.3	9.5
4	11 09	5 22	11 05*a*	5 30*b*	7.2	8.5	5.7	8.2	1.0	0.6	9 11	1.1	3.6	4.0	9.5
5	11 09	5 14	11 05*a*	5 22*b*	7.2	8.5	5.8	8.3	1.0	0.6	.....	1.1	3.6	4.0	9.5
6	11 09	5 09	11 05*a*	5 17*b*	7.3	8.6	5.8	8.3	1.0	0.6	.....	1.1	3.6	4.0	9.5
7	11 09	5 06	11 05*a*	5 14*b*	7.2	8.5	5.8	8.3	1.0	0.6	.....	1.1	3.6	4.0	10.0
8	11 07	5 06	11 03*a*	5 14*b*	7.3	8.6	5.8	8.3	1.0	0.6	.....	1.1	3.6	4.0	10.0
9	11 08	5 07	11 04*a*	5 15*b*	7.6	9.0	6.1	8.7	1.0	0.6	.....	1.1	3.8	4.1	10.0
10	11 06	4 59	11 02*a*	5 07*b*	7.6	9.0	6.1	8.7	1.0	0.6	.....	1.1	3.8	4.1	10.0
11	11 07	5 00	11 03*a*	5 08*b*	7.3	8.6	5.8	8.3	1.0	0.6	.....	1.1	3.6	3.9	10.0
12	11 05	4 59	11 01*a*	5 07*b*	7.0	8.3	5.6	8.0	1.0	0.6	.....	1.1	3.5	3.8	10.0
13	11 25	5 20	11 21*a*	5 28*b*	6.1	7.2	4.9	7.0	1.0	0.5	.....	1.1	3.0	3.2	10.0
14	11 08	4 56	10 59*a*	5 05*b*	6.6	7.8	5.3	7.6	1.0	0.5	.....	1.1	3.3	3.5	10.0
15	11 06	5 00	11 02*a*	5 11*b*	6.2	7.3	5.0	7.1	1.0	0.5	.....	1.1	3.1	3.3	10.0
16	11 41	5 46	11 37*a*	5 58*b*	6.6	7.8	5.3	7.5	1.0	0.5	.....	1.1	3.3	3.5	10.0
17	12 10	6 24	12 06*a*	6 37*b*	6.5	7.6	5.2	7.4	1.0	0.5	.....	1.1	3.2	3.4	10.0
18	12 20	7 00	12 16*a*	7 14*b*	5.0	5.9	4.0	5.7	1.0	0.4	.....	1.1	2.5	2.7	10.0
19	11 02	4 50	10 58*a*	5 05*b*	5.9	7.0	4.7	6.7	1.0	0.5	.....	1.1	3.0	3.2	10.5
20	11 00	4 44	10 56*a*	5 00*b*	4.9	5.8	4.0	5.6	1.0	0.4	.....	1.1	2.5	2.7	10.5
21	10 57	4 39	10 53*a*	4 56*b*	4.5	5.3	3.6	5.1	0.9	0.4	.....	1.0	2.2	2.4	10.5
22	10 51	4 33	10 46*a*	4 50*b*	4.0	4.7	3.2	4.6	0.9	0.3	.....	0.9	2.0	2.1	10.5
23	10 30	4 17	10 15*a*	4 35*b*	3.4	4.0	2.7	3.8	0.9	0.3	.....	0.9	1.7	1.8	11.0
24	10 00	3 41	9 55*a*	4 00*b*	2.7	3.2	2.2	3.1	0.9	0.2	.....	0.9	1.4	1.5	11.0
25	9 26	3 04	9 21*a*	3 23*b*	2.5	3.0	2.0	2.8	0.9	0.2	.....	0.9	1.2	1.3	11.0
26	9 31	3 27	9 26*a*	3 47*b*	2.5	3.0	2.0	2.8	0.9	0.2	.....	0.9	1.2	1.3	11.0
27	9 50	3 35	9 45*a*	3 55*b*	2.7	3.2	2.2	3.1	0.9	0.2	.....	0.9	1.4	1.5	11.0
28	10 20	4 02	10 15*a*	4 22*b*	2.5	3.0	2.0	2.8	0.9	0.2	.....	0.9	1.2	1.3	10.5
29	10 24	4 12	10 19*a*	4 32*b*	2.4	2.8	1.9	2.7	0.9	0.2	.....	0.9	1.2	1.3	10.5
30	11 12	5 00	11 07*a*	5 20*b*	2.5	3.0	2.0	2.9	0.9	0.2	.....	0.9	1.3	1.4	10.5
31	11 25	5 16	11 20*a*	5 36*b*	2.3	2.8	1.9	2.7	0.9	0.2	.....	0.9	1.2	1.3	10.5
32	12 11	6 10	12 06*a*	6 30*b*	2.4	2.8	1.9	2.7	0.9	0.2	.....	0.9	1.2	1.3	10.0
33	10 30	4 20	10 25*a*	4 40*b*	2.5	2.9	2.0	2.8	0.9	0.2	.....	0.9	1.2	1.3	10.5
34	10 07	4 00	10 02*a*	4 20*b*	2.6	3.1	2.1	3.0	0.9	0.2	.....	0.9	1.3	1.4	10.5
35	9 25	3 21	9 20*a*	3 41*b*	2.7	3.1	2.1	3.0	0.9	0.2	.....	0.9	1.3	1.4	11.0
36	9 15	3 05	9 10*a*	3 25*b*	2.5	3.0	2.0	2.8	0.9	0.2	.....	0.9	1.2	1.3	11.0
37	8 50	2 40	8 45*a*	3 00*b*	2.2	2.6	1.8	2.6	0.8	0.2	.....	0.8	1.1	1.2	11.0
38	8 20	2 08	8 15*a*	2 23*b*	2.0	2.4	1.6	2.3	0.8	0.2	.....	0.8	1.0	1.1	11.0
39	8 10	1 52	8 05*a*	2 12*b*	2.2	2.6	1.7	2.5	0.8	0.2	.....	0.8	1.1	1.2	11.0
40	8 00	1 45	7 55*a*	2 05*b*	2.3	2.8	1.8	2.7	0.8	0.2	.....	0.8	1.2	1.3	10.5
41	7 54	1 41	7 49*a*	2 01*b*	2.4	2.9	1.9	2.8	0.8	0.2	.....	0.8	1.2	1.3	10.5
42	7 48	1 38	7 43*a*	1 57*b*	2.5	3.0	2.0	2.8	0.9	0.2	.....	0.9	1.2	1.3	10.5
43	7 42	1 34	7 38*a*	1 53*b*	2.7	3.2	2.1	3.0	0.9	0.2	.....	0.9	1.3	1.4	10.5
44	7 36	1 30	7 32*a*	1 48*b*	2.9	3.4	2.3	3.2	0.9	0.2	.....	0.9	1.4	1.5	10.0
45	7 30	1 25	7 26*a*	1 43*b*	3.1	3.6	2.4	3.4	0.9	0.2	.....	0.9	1.5	1.6	10.0
46	10 55	4 50	10 48*a*	5 15*b*	1.1	1.4	0.9	1.3	0.6	0.1	.....	0.6	0.6	0.6	10.0
47	10 38	4 33	10 30*a*	4 53*b*	1.0	1.1	0.8	1.1	0.6	0.1	.....	0.6	0.5	0.5	10.0
48	7 25	1 22	7 21*a*	1 40*b*	3.3	3.9	2.6	3.7	0.9	0.2	.....	0.9	1.6	1.7	10.0
49	7 19	1 20	7 16*a*	1 37*b*	2.0	2.3	1.5	2.2	0.8	0.2	.....	0.8	1.0	1.1	10.0
50	9 50	3 50	9 44*a*	4 10*b*	1.2	1.4	0.9	1.3	0.6	0.1	.....	0.6	0.6	0.6	10.0
51	7 25	1 20	7 27*a*	1 34*b*	3.6	4.2	2.8	4.0	1.0	0.2	.....	1.0	1.8	1.9	9.5
52	7 30	1 25	7 22*a*	1 39*b*	3.8	4.5	3.0	4.2	1.0	0.2	.....	1.0	1.9	2.0	9.5
53	7 36	1 29	7 33*a*	1 43*b*	4.1	4.9	3.2	4.6	1.0	0.2	.....	1.0	2.0	2.1	9.5
54	7 42	1 15	7 39*a*	1 29*b*	4.3	5.2	3.4	4.8	1.0	0.2	.....	1.0	2.2	2.3	9.5
55	8 18	2 00	8 15*a*	2 14*b*	4.3	5.1	3.4	4.8	1.0	0.2	.....	1.0	2.2	2.3	9.5
56	8 45	2 48	8 42*a*	3 02*b*	4.0	4.8	3.2	4.4	1.0	0.2	.....	1.0	2.0	2.1	9.5
57	8 20	2 15	8 17*a*	2 29*b*	4.5	5.4	3.6	5.0	1.0	0.2	.....	1.0	2.3	2.4	9.5
58	7 35	1 15	7 32*a*	1 29*b*	4.7	5.5	3.7	5.1	1.1	0.2	.....	1.1	2.3	2.4	9.5
59	7 38	1 35	7 35*a*	1 49*b*	4.9	5.9	3.8	5.4	1.0	0.3	.....	1.0	2.4	2.5	9.0
60	7 36	1 32	7 33*a*	1 46*b*	5.1	6.1	4.0	5.6	1.0	0.3	.....	1.0	2.6	2.7	9.0
61	7 39	1 35	7 36*a*	1 49*b*	5.3	6.4	4.1	5.8	1.0	0.3	.....	1.0	2.6	2.7	9.0
62	7 41	1 39	7 38*a*	1 53*b*	5.3	6.4	4.1	5.8	1.0	0.3	.....	1.0	2.6	2.7	9.0
63	7 45	1 48	7 42*a*	2 02*b*	5.3	6.4	4.1	5.8	1.0	0.3	.....	1.0	2.6	2.7	9.0

Number.	Station.	Geographic position. Latitude.	Longitude. Arc.	Longitude. Time.	Standard port for reference. Name.	Page.	Tidal differences. Time. HW.	Time. LW.	Height. HW.	Height. LW.	Ratio of ranges.
	NORTH AMERICA (EAST COAST)—Continued.										
	NEW YORK—continued.										
	Staten Island—Continued.	*North.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Rossville, Arthur Kill	40 33	74 13	4 57	Sandy Hook	89	+ 0 36	+ 0 48	+0.6	0.0	1.13
2	Chelsea, Arthur Kill	40 36	74 12	4 57	New York	85	+ 0 19	+ 0 26	+0.6	0.0	1.14
3	Port Richmond, Kill van Kull	40 38	74 09	4 57	New York	85	+ 0 08	+ 0 11	+0.1	0.0	1.02
4	New Brighton, Kill van Kull	40 39	74 06	4 56	New York	85	− 0 08	− 0 15	+0.1	0.0	1.02
5	Fort Wadsworth Light, The Narrows	40 36	74 03	4 56	New York	85	− 0 21	− 0 25	+0.2	0.0	1.05
	New York Harbor.										
6	Bath, Gravesend Bay	40 36	74 00	4 56	New York	85	− 0 39	− 0 35	+0.4	0.0	1.09
7	Fort Hamilton, The Narrows	40 37	74 02	4 56	New York	85	− 0 21	− 0 25	+0.2	0.0	1.05
8	Bay Ridge	40 38	74 02	4 56	New York	85	− 0 15	− 0 18	+0.1	0.0	1.02
9	Gowanus Bay	40 40	74 01	5 56	New York	85	− 0 08	− 0 09	0.0	0.0	1.00
10	NEW YORK, Governors Island	40 42	74 01	4 56	New York	85	0 00	0 00	0.0	0.0	1.00
	NEW YORK AND NEW JERSEY.										
	Hudson River.										
11	New York, The Battery	40 42	74 01	4 56	New York	85	+ 0 02	+ 0 02	0.0	0.0	1.00
12	Jersey City, Penn. R. R. Ferry, N.J.	40 43	74 02	4 56	New York	85	+ 0 05	+ 0 05	0.0	0.0	0.99
13	New York, Desbrosses st	40 43	74 01	4 56	New York	85	+ 0 06	+ 0 06	0.0	0.0	0.99
14	Hoboken, 14th st., N. J.	40 45	74 02	4 56	New York	85	+ 0 12	+ 0 12	−0.1	0.0	0.98
15	Weehawken, Day Point, N. J.	40 46	74 01	4 56	New York	85	+ 0 18	+ 0 18	−0.2	0.0	0.96
16	New York, W. 72d st	40 47	73 59	4 56	New York	85	+ 0 20	+ 0 20	−0.2	0.0	0.96
17	General Grant's tomb, 122d st	40 49	73 58	4 56	New York	85	+ 0 28	+ 0 28	−0.2	0.0	0.94
18	Manhattan Iron Works, 143d st	40 50	73 57	4 56	New York	85	+ 0 31	+ 0 31	−0.3	0.0	0.94
19	Fort Washington Point	40 51	73 57	4 56	New York	85	+ 0 36	+ 0 37	−0.3	0.0	0.93
20	Spuyten Duyvil	40 53	73 56	4 56	New York	85	+ 0 45	+ 0 46	−0.4	0.0	0.91
21	Yonkers	40 56	73 54	4 56	New York	85	+ 0 56	+ 1 00	−0.5	0.0	0.88
22	Dobbs Ferry	41 01	73 53	4 56	New York	85	+ 1 17	+ 1 21	−0.7	0.0	0.84
23	Tarrytown	41 05	73 52	4 55	New York	85	+ 1 32	+ 1 39	−0.8	0.0	0.82
24	Ossining	41 10	73 52	4 55	New York	85	+ 1 50	+ 2 05	−1.0	0.0	0.78
25	Haverstraw	41 12	73 58	4 56	New York	85	+ 2 02	+ 2 21	−1.1	0.0	0.76
26	Peekskill	41 17	73 56	4 56	New York	85	+ 2 24	+ 2 51	−1.3	0.0	0.70
27	West Point	41 24	73 57	4 56	New York	85	+ 3 02	+ 3 31	−1.6	0.0	0.63
28	Newburgh	41 30	74 00	4 56	New York	85	+ 3 39	+ 4 01	−1.7	0.0	0.62
29	New Hamburg	41 35	73 57	4 56	New York	85	+ 4 07	+ 4 22	−1.5	0.0	0.65
30	Poughkeepsie	41 42	73 56	4 56	New York	85	+ 4 36	+ 4 50	−1.3	0.0	0.71
31	Hyde Park	41 47	73 57	4 56	New York	85	+ 4 51	+ 5 09	−1.1	0.0	0.75
32	Rondout	41 55	73 58	4 56	New York	85	+ 5 21	+ 5 35	−0.7	0.0	0.83
33	Tivoli	42 04	73 55	4 56	New York	85	+ 5 56	+ 6 06	−0.3	0.0	0.93
34	Catskill	42 13	73 51	4 55	New York	85	+ 6 40	+ 6 54	−0.2	0.0	0.96
35	Hudson	42 15	73 48	4 55	New York	85	+ 6 55	+ 7 10	−0.2	0.0	0.95
36	Coxsackie	42 21	73 48	4 55	New York	85	+ 7 27	+ 7 56	−0.5	0.0	0.89
37	New Baltimore	42 27	73 47	4 55	New York	85	+ 8 11	+ 8 54	−1.1	0.0	0.74
38	Castleton	42 32	73 45	4 55	New York	85	+ 8 58	+ 9 50	−1.7	0.0	0.61
39	Albany	42 39	73 45	4 55	New York	85	+ 9 54	+11 05	−2.0	0.0	0.55
40	Troy	42 44	73 42	4 55	New York	85	+11 25	+13 04	−2.1	0.0	0.53
	NEW JERSEY—continued.										
	Newark Bay.										
41	Shooters Island, N. Y.	40 39	74 10	4 57	New York	85	+ 0 17	+ 0 24	+0.2	0.0	1.05
42	Elizabethport	40 39	74 11	4 57	New York	85	+ 0 23	+ 0 34	+0.2	0.0	1.05
43	Passaic Light	40 42	74 08	4 57	New York	85	+ 0 38	+ 0 35	+0.3	0.0	1.07
44	Newark, Passaic River	40 44	74 10	4 57	New York	85	+ 0 58	+ 1 09	+0.6	0.0	1.14
45	Passaic, Passaic River	40 52	74 07	4 56	New York	85	+ 1 41	+ 2 05	−1.1	0.0	0.75
46	Little Ferry, Hackensack River	40 51	74 02	4 56	New York	85	+ 1 26	+ 1 48	+0.8	0.0	1.18
47	Hackensack, Hackensack River	40 53	74 02	4 56	New York	85	+ 1 36	+ 2 00	+0.8	0.0	1.18
	Raritan Bay, etc.										
48	New Brunswick	40 29	74 26	4 58	Sandy Hook	89	+ 0 49	+ 1 33	+1.3	0.0	1.28
49	South Amboy	40 29	74 16	4 57	Sandy Hook	89	+ 0 08	+ 0 16	+0.6	0.0	1.13
50	Keyport	40 27	74 12	4 57	Sandy Hook	89	+ 0 05	+ 0 14	+0.6	0.0	1.13
51	Port Monmouth	40 26	74 05	4 56	Sandy Hook	89	0 00	+ 0 04	+0.1	0.0	1.02
52	SANDY HOOK, The Horseshoe	40 27	74 00	4 56	Sandy Hook	89	0 00	0 00	0.0	0.0	1.00

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	8 10	2 14	8 07*a*	2 27*b*	5.3	6.3	4.1	5.8	1.0	0.3	.....	1.0	2.6	2.7	9.0
2	8 22	2 30	8 19*a*	2 43*b*	5.0	6.0	3.9	5.5	1.0	0.3	.....	1.0	2.5	2.6	9.0
3	8 11	2 15	8 08*a*	2 28*b*	4.5	5.4	3.5	5.0	1.0	0.3	.....	1.0	2.3	2.4	9.0
4	7 56	1 50	7 53*a*	2 03*b*	4.5	5.4	3.5	5.0	1.0	0.3	.....	1.0	2.3	2.4	9.0
5	7 43	1 40	7 40*a*	1 53*b*	4.6	5.6	3.6	5.1	1.0	0.3	.....	1.0	2.3	2.4	9.0
6	7 35	1 30	7 32*a*	1 43*b*	4.8	5.7	3.7	5.2	1.0	0.3	.....	1.0	2.4	2.5	9.0
7	7 43	1 40	7 40*a*	1 53*b*	4.6	5.6	3.6	5.1	1.0	0.3	7 02	1.0	2.3	2.4	9.0
8	7 49	1 47	7 46*a*	2 00*b*	4.5	5.4	3.5	5.0	1.0	0.3	.....	1.0	2.3	2.4	9.5
9	7 56	1 56	7 53*a*	2 09*b*	4.4	5.3	3.5	4.9	1.0	0.3	.....	1.0	2.2	2.3	9.5
10	8 04	2 05	8 01*a*	2 18*b*	4.4	5.3	3.4	4.9	1.0	0.3	7 12	1.0	2.2	2.3	9.5
11	8 06	2 07	8 03*a*	2 20*b*	4.4	5.3	3.4	4.9	1.0	0.3	.....	1.0	2.2	2.3	9.5
12	8 09	2 10	8 06*a*	2 23*b*	4.4	5.2	3.4	4.8	1.0	0.3	.....	1.0	2.2	2.3	9.5
13	8 10	2 11	8 07*a*	2 24*b*	4.4	5.2	3.4	4.8	1.0	0.3	.....	1.0	2.2	2.3	9.5
14	8 16	2 17	8 13*a*	2 30*b*	4.3	5.2	3.4	4.8	1.0	0.3	.....	1.0	2.2	2.3	9.5
15	8 22	2 23	8 19*a*	2 36*b*	4.2	5.1	3.3	4.7	1.0	0.3	.....	1.0	2.1	2.2	9.5
16	8 24	2 25	8 21*a*	2 38*b*	4.2	5.1	3.3	4.7	1.0	0.3	.....	1.0	2.1	2.2	9.5
17	8 32	2 33	8 29*a*	2 46*b*	4.2	5.0	3.2	4.6	1.0	0.2	.....	1.0	2.1	2.2	9.5
18	8 35	2 36	8 32*a*	2 49*b*	4.1	5.0	3.2	4.6	1.0	0.2	.....	1.0	2.1	2.2	9.5
19	8 40	2 42	8 37*a*	2 55*b*	4.1	4.9	3.2	4.5	0.9	0.2	.....	1.0	2.0	2.2	9.5
20	8 49	2 51	8 46*a*	3 04*b*	4.0	4.8	3.1	4.5	0.9	0.2	.....	1.0	2.0	2.1	9.5
21	9 00	3 05	8 57*a*	3 18*b*	3.9	4.7	3.0	4.3	0.9	0.2	.....	0.9	2.0	2.1	9.5
22	9 21	3 26	9 18*a*	3 39*b*	3.7	4.5	2.9	4.1	0.9	0.2	.....	0.9	1.9	2.0	10.0
23	9 37	3 45	9 34*a*	3 58*b*	3.6	4.3	2.8	4.0	0.8	0.2	.....	0.9	1.8	1.9	10.0
24	9 55	4 11	9 52*a*	4 24*b*	3.4	4.1	2.7	3.8	0.8	0.2	.....	0.8	1.7	1.8	10.0
25	10 06	4 26	10 03*a*	4 39*b*	3.3	4.0	2.6	3.7	0.8	0.2	.....	0.8	1.7	1.8	9.5
26	10 28	4 56	10 25*a*	5 09*b*	3.1	3.7	2.4	3.4	0.7	0.2	.....	0.7	1.6	1.6	9.5
27	11 06	5 36	11 03*a*	5 49*b*	2.8	3.3	2.2	3.1	0.6	0.2	.....	0.7	1.4	1.5	9.5
28	11 43	6 06	11 40*a*	6 19*b*	2.7	3.3	2.1	3.0	0.6	0.2	.....	0.6	1.4	1.4	9.5
29	12 11	6 27	12 08*a*	6 40*b*	2.9	3.4	2.2	3.2	0.7	0.2	.....	0.7	1.4	1.5	9.5
30	0 15	6 55	0 12*b*	7 08*b*	3.1	3.7	2.4	3.5	0.7	0.2	.....	0.7	1.6	1.7	9.5
31	0 30	7 14	0 27*b*	7 27*b*	3.3	4.0	2.6	3.7	0.8	0.2	.....	0.8	1.7	1.8	10.0
32	1 00	7 40	0 57*b*	7 58*b*	3.7	4.4	2.9	4.1	0.8	0.2	.....	0.9	1.8	1.9	10.0
33	1 35	8 11	1 32*b*	8 24*b*	4.1	4.9	3.2	4.6	0.9	0.2	.....	1.0	2.0	2.2	10.0
34	2 20	9 00	2 17*b*	9 13*b*	4.2	5.1	3.3	4.7	1.0	0.3	.....	1.0	2.1	2.2	10.5
35	2 35	9 16	2 32*b*	9 29*b*	4.2	5.0	3.3	4.7	1.0	0.3	.....	1.0	2.1	2.2	11.0
36	3 07	10 02	3 04*b*	10 15*b*	3.9	4.7	3.1	4.4	0.9	0.2	.....	0.9	2.0	2.1	11.0
37	3 51	11 00	3 48*b*	11 13*b*	3.3	3.9	2.5	3.6	0.8	0.2	.....	0.8	1.6	1.7	11.0
38	4 38	11 56	4 35*b*	12 09*b*	2.7	3.2	2.1	3.0	0.6	0.2	.....	0.6	1.3	1.4	11.0
39	5 34	0 46	5 31*b*	0 59*a*	2.4	2.9	1.9	2.7	0.6	0.1	.....	0.6	1.2	1.3	11.5
40	7 05	2 45	7 02*b*	2 58*a*	2.3	2.8	1.8	2.6	0.5	0.1	.....	0.6	1.2	1.2	11.5
41	8 20	2 28	8 17*a*	2 41*b*	4.6	5.5	3.6	5.1	1.0	0.3	.....	1.0	2.3	2.4	9.0
42	8 26	2 38	8 23*a*	2 51*b*	4.6	5.5	3.6	5.2	1.0	0.3	.....	1.0	2.3	2.4	9.0
43	8 41	2 39	8 38*a*	2 52*b*	4.7	5.7	3.7	5.3	1.0	0.3	.....	1.0	2.4	2.5	9.0
44	9 01	3 13	8 58*a*	3 26*b*	5.0	6.0	3.9	5.6	1.0	0.3	.....	1.0	2.5	2.6	9.0
45	9 45	4 10	9 42*a*	4 23*b*	5.3	6.3	4.0	5.7	0.8	0.2	.....	0.8	1.6	1.7	9.5
46	9 30	3 53	9 27*a*	4 06*b*	5.2	6.3	4.1	5.9	1.0	0.3	.....	1.0	2.6	2.7	9.5
47	9 40	4 05	9 37*a*	4 18*b*	5.2	6.2	4.0	5.8	1.0	0.3	.....	1.0	2.6	2.7	9.5
48	8 22	2 58	8 19*a*	3 12*b*	6.0	7.2	4.8	6.5	1.1	0.2	.....	1.1	3.0	3.0	9.0
49	7 42	1 42	7 39*a*	1 56*b*	5.3	6.3	4.2	5.7	1.1	0.2	.....	1.1	2.6	2.6	9.0
50	7 39	1 40	7 36*a*	1 54*b*	5.3	6.3	4.2	5.7	1.1	0.2	.....	1.1	2.7	2.7	9.0
51	7 35	1 31	7 32*a*	1 45*b*	4.8	5.7	3.8	5.1	1.1	0.2	.....	1.1	2.4	2.4	9.0
52	7 35	1 27	7 32*a*	1 41*b*	4.7	5.6	3.7	5.0	1.1	0.2	6 51	1.0	2.3	2.3	9.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST)—Continued.										
	NEW JERSEY—continued.										
		North.	West.				Time meridian, 75° W.		Mean Low Water.		
	Outer coast.	° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Seabright	40 22	73 58	4 56	Sandy Hook	89	− 0 10	− 0 10	−0.3	0.0	0.94
2	Long Branch	40 18	73 59	4 56	Sandy Hook	89	− 0 14	− 0 14	−0.4	0.0	0.91
3	Asbury Park	40 13	74 00	4 56	Sandy Hook	89	− 0 17	− 0 17	−0.6	0.0	0.87
4	Seagirt	40 08	74 02	4 56	Sandy Hook	89	− 0 15	− 0 14	−0.9	0.0	0.80
5	Barnegat Inlet	39 46	74 06	4 56	New London	77	− 1 28	− 1 39	−0.3	0.0	0.89
6	Barnegat Landing, Barnegat Bay	39 45	74 11	4 57	New London	77	−0 01	−0 07	−1.4	0.0	0.43
7	Cedar Creek Entrance, Barnegat B.	39 52	74 08	4 57	New London	77	+0 35	+0 28	−1.5	0.0	0.37
8	Island Heights, Toms R., Barnegat B.	39 56	74 09	4 57	New London	77	+1 45	+1 45	−1.7	0.0	0.30
9	Kettle Creek, Barnegat Bay	40 01	74 07	4 56	New London	77	+2 52	+2 53	−1.8	0.0	0.28
10	Little Egg Inlet	39 30	74 18	4 57	New London	77	−1 35	+1 49	+0.8	0.0	1.33
11	Mullica R. Entrance, Great Bay	39 32	74 24	4 58	New London	77	−0 42	−0 30	+0.2	0.0	1.07
12	Long Point, Little Egg Harbor	39 36	74 16	4 57	New London	77	+0 16	+0 25	−0.1	0.0	0.94
13	Atlantic City	39 22	74 25	4 58	Sandy Hook	89	+0 06	+0 04	−0.8	0.0	0.83
14	Absecon Bay	39 24	74 29	4 58	Sandy Hook	89	+1 04	+1 15	−0.7	0.0	0.84
15	Great Egg Inlet	39 18	74 33	4 58	Sandy Hook	89	+0 03	0 00	−0.6	0.0	0.88
16	Corson Inlet	39 12	74 39	4 59	Sandy Hook	89	+0 03	−0 03	−0.5	0.0	0.90
17	Townsend Inlet	39 07	74 43	4 59	Sandy Hook	89	0 00	−0 06	−0.5	0.0	0.90
18	Hereford Inlet	39 01	74 47	4 59	Sandy Hook	89	−0 02	−0 09	−0.4	0.0	0.91
19	Sewells Point, Cold Spring Inlet	38 57	74 52	4 59	Sandy Hook	89	+0 05	0 00	−0.3	0.0	0.94
20	Cape May City	38 56	74 55	5 00	Sandy Hook	89	+0 19	+0 10	−0.1	0.0	0.97
	NEW JERSEY, DELAWARE, AND PENNSYLVANIA.										
	Delaware Bay.										
21	Cape May Light, N. J	38 56	74 58	5 00	Sandy Hook	89	+0 29	+0 17	0.0	0.0	1.00
22	Cape Henlopen, Del	38 48	75 05	5 00	Sandy Hook	89	+0 34	+0 23	−0.5	0.0	0.90
23	Lewes, Del	38 47	75 08	5 01	Sandy Hook	89	+0 38	+0 29	−0.3	0.0	0.93
24	Broadkill Creek Entrance, Del	38 50	75 13	5 01	Sandy Hook	89	+0 46	+0 41	−0.1	0.0	0.98
25	Mispillion Creek Light, Del	38 57	75 19	5 01	Sandy Hook	89	+1 08	+1 10	+0.5	0.0	1.10
26	Brandywine Shoal Light, Del	38 59	75 07	5 00	Sandy Hook	89	+0 59	+0 57	+0.4	0.0	1.09
27	Fourteen-Foot Bank Light, Del	39 03	75 11	5 01	Sandy Hook	89	+1 13	+1 15	+0.7	0.0	1.15
28	Marcys Landing, N. J	39 02	74 56	5 00	Sandy Hook	89	+0 39	+0 31	+0.4	0.0	1.09
29	Maurice River Light, N. J	39 12	75 02	5 00	Sandy Hook	89	+1 16	+1 20	+1.1	0.0	1.23
30	Port Norris, Maurice River, N. J	39 14	75 02	5 00	Philadelphia	93	−4 46	−5 43	+0.3	0.0	1.06
31	Mauricetown, Maurice River, N. J.	39 17	74 58	5 00	Philadelphia	93	−3 56	−4 33	−0.1	0.0	0.99
32	Millville, Maurice River, N. J	39 24	75 02	5 00	Philadelphia	93	−2 26	−2 45	−0.6	0.0	0.89
33	Egg Island Light, N. J	39 11	75 08	5 01	Philadelphia	93	−4 53	−6 00	+0.7	0.0	1.13
34	Cross Ledge Light, N. J	39 10	75 14	5 01	Philadelphia	93	−4 47	−5 52	+0.5	0.0	1.10
35	Murderkill Creek Entrance, Del	39 03	75 24	5 02	Philadelphia	93	−4 58	−6 07	+0.2	0.0	1.03
36	Frederica, Murderkill Creek, Del	39 01	75 26	5 02	Philadelphia	93	−3 59	−4 41	−2.6	0.0	0.51
37	Lebanon, St. Jones Creek, Del	39 06	75 28	5 02	Philadelphia	93	−3 54	−4 31	−2.8	0.0	0.48
38	Dover, St. Jones Creek, Del	39 09	75 30	5 02	Philadelphia	93	−2 54	−3 11	−4.3	0.0	0.19
39	Mahon River Light, Del	39 11	75 24	5 02	Philadelphia	93	−4 29	−5 29	+0.5	0.0	1.10
40	Fortescue Beach, N. J	39 14	75 10	5 01	Philadelphia	93	−4 41	−5 44	+0.7	0.0	1.14
41	Dona Landing, Dona River, Del	39 13	75 26	5 02	Philadelphia	93	−4 12	−4 58	−0.5	0.0	0.91
42	Leipsic River Entrance, Del	39 15	75 24	5 02	Philadelphia	93	−4 16	−5 12	+0.6	0.0	1.12
43	Leipsic, Leipsic River, Del	39 15	75 29	5 02	Philadelphia	93	−3 24	−3 46	−2.3	0.0	0.57
44	Ben Davis Point, N. J	39 17	75 17	5 01	Philadelphia	93	−4 21	−5 17	+0.8	0.0	1.15
45	Ship John Shoal Light, N. J	39 18	75 23	5 02	Philadelphia	93	−4 09	−5 08	+0.7	0.0	1.14
	Delaware River.										
46	Cohansey Light, N. J	39 21	75 22	5 01	Philadelphia	93	−4 05	−4 57	+0.8	0.0	1.14
47	Greenwich, Cohansey Creek, N. J	39 23	75 19	5 01	Philadelphia	93	−3 35	−4 17	+0.6	0.0	1.12
48	Bridgeton, Cohansey Creek, N. J	39 26	75 14	5 01	Philadelphia	93	−2 35	−2 52	+1.2	0.0	1.24
49	Bombay Hook Point, Del	39 19	75 26	5 02	Philadelphia	93	−4 00	−4 51	+0.7	0.0	1.14
50	Bombay Hook Light, Del	39 22	75 31	5 02	Philadelphia	93	−3 44	−4 29	+0.7	0.0	1.13
51	Liston Point, Del	39 25	75 32	5 02	Philadelphia	93	−3 32	−4 13	+0.7	0.0	1.13
52	Stony Point, N. J	39 28	75 31	5 02	Philadelphia	93	−3 28	−4 08	+0.6	0.0	1.12
53	Reedy Island Quarantine, Del	39 31	75 34	5 02	Philadelphia	93	−3 11	−3 42	+0.6	0.0	1.12
54	Salem, Salem Creek, N. J	39 34	75 28	5 02	Philadelphia	93	−2 49	−2 57	+1.1	0.0	1.22
55	Delaware City, Del	39 35	75 35	5 02	Philadelphia	93	−2 53	−3 17	+0.7	0.0	1.13
56	New Castle, Del	39 39	75 34	5 02	Philadelphia	93	−2 32	−2 53	+0.7	0.0	1.13
57	Deep Water Point, N. J	39 42	75 31	5 02	Philadelphia	93	−2 16	−2 33	+0.7	0.0	1.14
58	Wilmington, Del	39 44	75 32	5 02	Philadelphia	93	−2 04	−2 21	+0.5	0.0	1.10
59	Edgemoor, Cherry Island Lt., Del	39 45	75 30	5 02	Philadelphia	93	−2 00	−2 16	+0.7	0.0	1.14
60	Marcus Hook, Pa	39 49	75 25	5 02	Philadelphia	93	−1 33	−1 45	+0.6	0.0	1.12

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	7 25	1 17	7 22*a*	1 31*b*	4.4	5.3	3.5	4.8	1.0	0.2	.....	1.0	2.2	2.2	9.0
2	7 21	1 13	7 18*a*	1 27*b*	4.3	5.1	3.4	4.6	1.0	0.2	.....	1.0	2.1	2.1	9.0
3	7 18	1 10	7 15*a*	1 24*b*	4.1	4.9	3.2	4.4	0.9	0.2	.....	0.9	2.0	2.0	9.0
4	7 20	1 13	7 17*a*	1 28*b*	3.8	4.5	3.0	4.1	0.9	0.2	.....	0.9	1.9	1.9	8.5
5	7 50	1 43	7 46*a*	2 01*b*	2.2	2.6	1.8	2.5	0.7	0.1	.....	0.7	1.1	1.1	8.5
6	9 16	3 14	9 11*a*	3 33*b*	1.1	1.3	0.8	1.3	0.5	0.1	.....	0.5	0.5	0.6	8.5
7	9 52	3 49	9 47*a*	4 08*b*	0.9	1.1	0.7	1.2	0.5	0.1	.....	0.5	0.5	0.5	8.5
8	11 02	5 06	10 57*a*	5 26*b*	0.7	0.9	0.6	1.0	0.4	0.1	.....	0.4	0.4	0.4	8.5
9	12 10	6 15	12 05*a*	6 36*b*	0.7	0.8	0.6	0.9	0.4	0.1	.....	0.4	0.4	0.4	8.5
10	7 42	1 32	7 39*a*	1 50*b*	3.3	3.9	2.6	3.5	0.8	0.1	.....	0.8	1.6	1.6	8.0
11	8 34	2 50	8 30*a*	3 08*b*	2.6	3.2	2.1	2.9	0.7	0.1	.....	0.7	1.3	1.3	8.0
12	9 33	3 46	9 28*a*	4 06*b*	2.3	3.8	1.9	2.6	0.7	0.1	.....	0.7	1.2	1.2	8.0
13	7 39	1 29	7 36*a*	1 47*b*	3.9	4.7	3.1	4.2	0.9	0.2	.....	0.9	1.9	1.9	8.0
14	8 37	2 40	8 33*a*	2 59*b*	3.9	4.7	3.2	4.3	0.9	0.2	.....	0.9	2.0	2.0	8.0
15	7 36	1 25	7 33*a*	1 43*b*	4.1	4.9	3.3	4.5	1.0	0.2	.....	1.0	2.1	2.1	7.5
16	7 35	1 21	7 32*a*	1 38*b*	4.2	5.0	3.4	4.6	1.0	0.2	.....	1.0	2.1	2.1	7.5
17	7 32	1 18	7 29*a*	1 35*b*	4.2	5.1	3.4	4.6	1.0	0.2	.....	1.0	2.1	2.1	7.0
18	7 30	1 15	7 27*a*	1 31*b*	4.2	5.1	3.4	4.6	1.0	0.2	.....	1.0	2.1	2.1	7.0
19	7 37	1 24	7 34*a*	1 40*b*	4.4	5.3	3.5	4.8	1.0	0.2	.....	1.0	2.2	2.2	7.0
20	7 50	1 38	7 48*a*	1 49*b*	4.6	5.5	3.6	4.9	1.0	0.2	.....	1.0	2.3	2.3	7.0
21	8 00	1 40	7 56*a*	1 54*b*	4.7	5.6	3.8	5.1	1.0	0.2	.....	1.0	2.4	2.4	7.0
22	8 05	1 46	8 01*a*	1 58*b*	4.2	5.0	3.4	4.6	0.9	0.2	.....	1.0	2.1	2.2	6.5
23	8 08	1 51	8 04*a*	2 01*b*	4.4	5.2	3.5	4.7	0.9	0.2	.....	1.0	2.2	2.2	6.5
24	8 16	2 08	8 12*a*	2 11*b*	4.6	5.5	3.7	4.9	0.9	0.2	.....	1.0	2.3	2.4	6.5
25	8 38	2 32	8 34*a*	2 38*b*	5.1	6.1	4.2	5.5	1.0	0.2	.....	1.1	2.6	2.6	6.5
26	8 30	2 20	8 26*a*	2 24*b*	5.1	6.0	4.2	5.5	1.0	0.2	.....	1.1	2.6	2.6	6.5
27	8 43	2 37	8 39*a*	2 40*b*	5.4	6.3	4.4	5.7	1.0	0.2	.....	1.1	2.7	2.7	6.5
28	8 10	1 54	8 06*a*	2 00*b*	5.1	6.0	4.2	5.5	1.0	0.2	.....	1.1	2.5	2.6	7.0
29	8 47	2 43	8 43*a*	2 44*b*	5.8	6.8	4.7	6.1	1.1	0.2	.....	1.1	2.9	2.9	7.0
30	9 10	3 20	9 06*a*	3 18*a*	5.6	6.6	4.6	6.0	1.1	0.2	.....	1.1	2.8	2.9	7.0
31	10 00	4 30	9 56*a*	4 24*a*	5.2	6.1	4.3	5.6	1.0	0.2	.....	1.1	2.6	2.7	7.0
32	11 30	6 18	11 26*a*	6 10*a*	4.7	5.5	3.9	5.1	1.0	0.2	.....	1.0	2.4	2.5	7.0
33	9 02	3 02	8 58*a*	2 58*a*	5.9	6.9	4.9	6.3	1.1	0.2	.....	1.1	3.0	3.1	7.0
34	9 08	3 10	9 04*a*	3 04*a*	5.8	6.8	4.8	6.2	1.1	0.2	.....	1.1	2.9	3.0	6.5
35	8 56	2 54	8 52*a*	2 50*a*	5.4	6.4	4.5	5.8	1.0	0.2	.....	1.1	2.7	2.8	6.5
36	9 55	4 20	9 51*a*	4 14*a*	2.7	3.1	2.3	3.0	0.7	0.2	.....	0.7	1.4	1.4	6.5
37	10 00	4 30	9 56*a*	4 24*a*	2.5	2.9	2.1	2.8	0.7	0.2	.....	0.7	1.2	1.3	6.5
38	11 00	5 50	10 56*a*	5 40*a*	1.0	1.2	0.8	1.2	0.4	0.1	.....	0.5	0.5	0.6	6.5
39	9 25	3 32	9 21*a*	3 24*a*	5.8	6.7	4.9	6.2	1.0	0.3	.....	1.1	2.9	3.0	6.5
40	9 14	3 18	9 10*a*	3 12*a*	6.0	7.0	5.0	6.4	1.0	0.3	.....	1.1	3.0	3.1	7.0
41	9 42	4 08	9 38*a*	3 55*a*	4.8	5.5	4.1	5.2	1.0	0.2	.....	1.0	2.4	2.5	6.5
42	9 38	3 49	9 34*a*	3 40*a*	5.9	6.8	5.0	6.3	1.1	0.3	.....	1.1	3.0	3.1	6.5
43	10 30	5 15	10 26*a*	5 05*a*	3.0	3.4	2.6	3.3	0.8	0.2	.....	0.8	1.5	1.6	6.5
44	9 34	3 45	9 30*a*	3 35*a*	6.0	6.9	5.1	6.4	1.1	0.3	.....	1.1	3.0	3.2	7.0
45	9 45	3 58	9 41*a*	3 48*a*	6.0	6.9	5.1	6.4	1.1	0.3	.....	1.1	3.0	3.1	7.0
46	9 50	4 05	9 47*a*	3 53*a*	6.0	6.9	5.2	6.5	1.0	0.3	.....	1.1	3.0	3.2	7.0
47	10 20	4 45	10 17*a*	4 33*a*	5.9	6.7	5.1	6.3	1.0	0.3	.....	1.1	3.0	3.1	7.0
48	11 20	6 10	11 17*a*	5 58*a*	6.5	7.4	5.6	6.9	1.1	0.3	.....	1.1	3.2	3.4	7.0
49	9 54	4 10	9 51*a*	3 58*a*	6.0	6.8	5.1	6.4	1.0	0.3	.....	1.1	3.0	3.1	6.5
50	10 10	4 32	10 07*a*	4 20*a*	6.0	6.8	5.1	6.4	1.0	0.3	.....	1.1	3.0	3.1	6.5
51	10 22	4 48	10 19*a*	4 36*a*	5.9	6.6	5.2	6.4	1.0	0.3	.....	1.0	3.0	3.1	6.5
52	10 26	4 58	10 23*a*	4 40*a*	5.9	6.6	5.2	6.4	1.0	0.3	.....	1.0	3.0	3.1	6.5
53	10 43	5 19	10 40*a*	5 06*a*	5.9	6.6	5.2	6.3	1.0	0.3	.....	1.0	2.9	3.1	6.5
54	11 05	6 04	11 02*a*	5 50*a*	6.4	7.2	5.6	6.9	1.0	0.3	.....	1.1	3.2	3.4	6.5
55	11 01	5 44	10 58*a*	5 30*a*	5.9	6.7	5.2	6.4	1.0	0.3	.....	1.0	3.0	3.1	6.5
56	11 22	6 08	11 19*a*	5 54*a*	6.0	6.6	5.4	6.5	1.0	0.3	.....	1.0	3.0	3.1	7.0
57	11 38	6 28	11 35*a*	6 14*a*	6.0	6.6	5.4	6.5	1.0	0.3	.....	1.0	3.0	3.1	7.0
58	11 50	6 40	11 47*a*	6 25*a*	5.8	6.4	5.2	6.3	1.0	0.3	.....	1.0	2.9	3.0	7.0
59	11 54	6 45	11 51*a*	6 30*a*	6.0	6.6	5.4	6.5	1.0	0.3	.....	1.0	3.0	3.1	7.0
60	12 21	7 16	12 18*a*	7 00*a*	5.9	6.5	5.3	6.4	1.0	0.3	.....	1.0	3.0	3.1	7.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST)—Continued.										
	NEW JERSEY, DELAWARE, AND PENNSYLVANIA—continued.										
	Delaware River—Continued.	*North.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Chester, Pa	39 50	75 22	5 01	Philadelphia	93	−1 24	−1 35	+0.6	0.0	1.11
2	Billingsport, N. J	39 51	75 15	5 01	Philadelphia	93	−0 53	−1 01	+0.3	0.0	1.06
3	Fort Mifflin, Pa	39 52	75 13	5 01	Philadelphia	93	−0 39	−0 43	+0.2	0.0	1.04
4	Girard Point, Schuylkill River, Pa	39 54	75 12	5 01	Philadelphia	93	−0 34	−0 38	+0.2	0.0	1.03
5	Point Breeze, Schuylkill River, Pa	39 55	75 12	5 01	Philadelphia	93	−0 24	−0 28	+0.2	0.0	1.03
6	Grays Ferry Bridge, Sch'lkill R., Pa	39 57	75 12	5 01	Philadelphia	93	−0 18	−0 21	+0.2	0.0	1.04
7	Fairmount Bridge, Schuylkill R., Pa	39 58	75 11	5 01	Philadelphia	93	−0 13	−0 15	+0.3	0.0	1.05
8	League Island Navy-Yard, Pa	39 53	75 11	5 01	Philadelphia	93	−0 30	−0 33	+0.1	0.0	1.02
9	Gloucester, Mercer st., N. J	39 54	75 08	5 01	Philadelphia	93	−0 19	−0 20	0.0	0.0	1.01
10	Philadelphia, Washington ave., Pa	39 56	75 09	5 01	Philadelphia	93	−0 06	−0 06	0.0	0.0	1.00
11	PHILADELPHIA, Chestnut st., Pa	39 57	75 08	5 01	Philadelphia	93	0 00	0 00	0.0	0.0	1.00
12	Camden, Coopers Point, N. J	39 57	75 08	5 01	Philadelphia	93	+0 08	+0 02	0.0	0.0	1.00
13	Philadelphia, Cramps Ship Yd., Pa	39 58	75 07	5 00	Philadelphia	93	+0 08	+0 07	0.0	0.0	1.00
14	Bridesburg, Pa	40 00	75 04	5 00	Philadelphia	93	+0 29	+0 29	+0.1	0.0	1.03
15	Delanco, Rancocas Creek, N. J	40 03	74 57	5 00	Philadelphia	93	+1 01	+1 02	+0.3	0.0	1.05
16	Centerton, Rancocas Creek, N. J	40 00	74 52	4 59	Philadelphia	93	+1 28	+1 36	−1.2	0.0	0.78
17	Mount Holly, Rancocas Creek, N. J	40 00	74 48	4 59	Philadelphia	93	+1 58	+2 26	−4.0	0.0	0.25
18	Burlington, N. J	40 05	74 51	4 59	Philadelphia	93	+1 32	+1 35	+0.2	0.0	1.03
19	Bordentown, N. J	40 09	74 43	4 59	Philadelphia	93	+2 25	+2 35	−0.5	0.0	0.90
20	Trenton, N. J	40 13	74 46	4 59	Philadelphia	93	+2 58	+3 11	−1.0	0.0	0.81
	DELAWARE—continued.										
	Outer coast.										
21	Rehoboth	38 43	75 05	5 00	Sandy Hook	89	+0 30	+0 19	−0.7	0.0	0.85
22	Indian River Inlet	38 37	75 04	5 00	Sandy Hook	89	+0 25	+0 14	−0.8	0.0	0.82
	MARYLAND.										
	Outer coast.										
23	Fenwick Island Light	38 27	75 03	5 00	Sandy Hook	89	+0 17	+0 06	−1.0	0.0	0.79
24	Ocean City	38 20	75 05	5 00	Sandy Hook	89	+0 10	+0 01	−1.0	0.0	0.78
25	North Beach Life-Saving Station	38 12	75 09	5 01	Sandy Hook	89	+0 06	−0 03	−1.1	0.0	0.77
	VIRGINIA.										
	Outer coast.										
26	Chincoteague Inlet	37 53	75 25	5 02	Old Point Comfort	105	−1 17	−1 07	+0.7	0.0	1.26
27	Franklin City	38 00	75 23	5 02	Old Point Comfort	105	+0 46	+1 15	−1.5	0.0	0.40
28	Metomkin Inlet	37 41	75 35	5 02	Old Point Comfort	105	−1 13	−1 04	+1.2	0.0	1.46
29	Great Machipongo Inlet	37 22	75 43	5 03	Old Point Comfort	105	−0 59	−0 49	+1.8	0.0	1.72
30	Ship Shoal Inlet	37 13	75 48	5 03	Old Point Comfort	105	−0 50	−0 42	+1.7	0.0	1.66
	Chesapeake Bay, Eastern Shore.										
31	Cape Charles Quarantine	37 06	75 59	5 04	Old Point Comfort	105	−0 40	−0 31	+0.3	0.0	1.12
32	Old Plantation Light	37 14	76 03	5 04	Old Point Comfort	105	−0 15	−0 06	−0.2	0.0	0.94
33	Cherrystone Light	37 16	76 02	5 04	Old Point Comfort	105	−0 11	−0 02	−0.2	0.0	0.92
34	Naswaddox Creek	37 28	75 58	5 04	Old Point Comfort	105	+1 03	+1 17	−0.7	0.0	0.73
35	Pungoteague Creek	37 40	75 50	5 03	Old Point Comfort	105	+2 12	+2 30	−0.8	0.0	0.69
36	Watts Island Light	37 47	75 54	5 04	Old Point Comfort	105	+2 59	+3 18	−0.8	0.0	0.69
37	Tangier Sound Light	37 47	75 58	5 04	Old Point Comfort	105	+2 59	+3 18	−0.9	0.0	0.68
	MARYLAND—continued.										
	Chesapeake Bay, Eastern Shore.										
38	Shelltown, Pocomoke River	37 59	75 38	5 03	Old Point Comfort	105	+4 05	+4 43	−0.1	0.0	0.97
39	Pocomoke, Pocomoke River	38 05	75 34	5 02	Old Point Comfort	105	+5 28	+6 07	+0.8	0.0	1.12
40	Snowhill, Pocomoke River	38 09	75 25	5 02	Old Point Comfort	105	+6 43	+7 22	+0.5	0.0	1.19
41	Janes Island Light	37 58	75 55	5 04	Old Point Comfort	105	+3 59	+4 20	−0.7	0.0	0.71
42	Crisfield, Little Annemessex River	37 59	75 52	5 03	Old Point Comfort	105	+4 02	+4 35	−0.6	0.0	0.75
43	Solomons Lump Light	38 03	76 01	5 04	Old Point Comfort	105	+4 20	+4 44	−0.8	0.0	0.67
44	Holland Island Bar Light	38 04	76 06	5 04	Old Point Comfort	105	+4 23	+4 49	−0.9	0.0	0.64
45	Sharkfin Shoal Light	38 12	75 59	5 04	Old Point Comfort	105	+4 53	+5 19	−0.3	0.0	0.88
46	Great Shoals Light, Monie Bay	38 13	75 53	5 04	Old Point Comfort	105	+5 11	+5 44	−0.1	0.0	0.98
47	Vienna, Nanticoke River	38 29	75 49	5 03	Old Point Comfort	105	+6 24	+7 03	+0.5	0.0	1.20

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	0 06	7 27	0 03*b*	7 11*a*	5.8	6.3	5.4	6.3	1.0	0.3	.....	1.0	2.9	3.1	7.5
2	0 37	8 01	0 34*b*	7 45*a*	5.6	6.0	5.1	6.1	1.0	0.3	.....	1.0	2.8	2.9	7.5
3	0 51	8 19	0 48*b*	8 03*a*	5.5	5.8	5.1	6.0	1.0	0.3	.....	1.0	2.7	2.9	7.5
4	0 56	8 24	0 53*b*	8 08*a*	5.4	5.8	5.1	5.9	1.0	0.3	.....	1.0	2.7	2.9	8.0
5	1 06	8 34	1 03*b*	8 18*a*	5.4	5.8	5.1	5.9	1.0	0.3	.....	1.0	2.7	2.9	8.0
6	1 12	8 41	1 09*b*	8 25*a*	5.5	5.8	5.1	6.0	1.0	0.3	.....	1.0	2.7	2.9	8.0
7	1 17	8 47	1 14*b*	8 30*a*	5.5	5.9	5.2	6.0	1.0	0.3	.....	1.0	2.8	2.9	8.0
8	1 00	8 29	0 57*b*	8 12*a*	5.4	5.7	5.0	5.9	1.0	0.3	.....	1.0	2.7	2.8	8.0
9	1 11	8 42	1 08*b*	8 24*a*	5.3	5.7	4.9	5.8	1.0	0.3	.....	1.0	2.6	2.8	8.0
10	1 24	8 56	1 21*b*	8 38*a*	5.3	5.6	4.9	5.8	1.0	0.3	18 59	1.0	2.6	2.8	8.0
11	1 30	9 02	1 27*b*	8 44*a*	5.3	5.6	4.9	5.8	1.0	0.3	14 28	1.0	2.6	2.8	8.0
12	1 33	9 04	1 30*b*	8 46*a*	5.3	5.6	4.9	5.8	1.0	0.3	.....	1.0	2.6	2.8	8.0
13	1 39	9 10	1 36*b*	8 52*a*	5.3	5.6	4.9	5.8	1.0	0.3	.....	1.0	2.6	2.8	8.0
14	2 00	9 32	1 57*b*	9 14*a*	5.4	5.8	5.0	5.9	1.0	0.3	.....	1.0	2.7	2.8	8.0
15	2 32	10 05	2 29*b*	9 47*a*	5.5	5.9	5.1	6.0	1.0	0.3	.....	1.0	2.8	2.9	8.0
16	3 00	10 40	2 57*b*	10 22*a*	4.1	4.4	3.8	4.6	0.8	0.2	.....	0.9	2.0	2.2	8.0
17	3 30	11 30	3 27*b*	11 12*a*	1.3	1.4	1.2	1.6	0.5	0.1	.....	0.5	0.6	0.7	8.0
18	3 04	10 39	3 01*b*	10 21*a*	5.4	5.8	5.1	5.9	1.0	0.3	.....	1.0	2.7	2.9	8.0
19	3 57	11 39	3 54*b*	11 21*a*	4.7	5.1	4.4	5.2	0.9	0.3	.....	0.9	2.4	2.5	8.0
20	4 30	12 15	4 27*b*	11 57*a*	4.2	4.5	3.9	4.7	0.8	0.3	.....	0.9	2.1	2.2	8.0
21	8 01	1 42	7 59*a*	1 56*b*	4.0	4.8	3.2	4.8	0.9	0.1	.....	0.9	2.0	2.0	6.0
22	7 56	1 37	7 54*a*	1 48*b*	3.9	4.6	3.1	4.2	0.9	0.1	.....	0.9	1.9	2.0	6.0
23	7 48	1 29	7 46*a*	1 37*b*	3.7	4.4	3.0	4.0	0.8	0.1	.....	0.8	1.8	1.9	6.0
24	7 41	1 24	7 39*a*	1 29*b*	3.6	4.4	2.9	3.9	0.8	0.1	.....	0.8	1.8	1.9	6.0
25	7 36	1 19	7 34*a*	1 21*b*	3.6	4.3	2.9	3.9	0.8	0.1	.....	0.8	1.8	1.8	6.0
26	7 30	1 11	7 28*a*	1 07*a*	3.2	3.8	2.6	3.4	0.7	0.1	.....	0.7	1.6	1.6	5.5
27	9 33	3 33	9 31*a*	3 19*a*	1.0	1.2	0.8	1.3	0.5	0.1	.....	0.5	0.5	0.6	5.5
28	7 34	1 14	7 33*a*	1 05*a*	3.7	4.4	3.0	3.9	0.7	0.1	.....	0.7	1.8	1.9	5.5
29	7 47	1 28	7 46*a*	1 16*a*	4.4	5.3	3.5	4.6	0.7	0.1	.....	0.7	2.2	2.2	5.0
30	7 56	1 35	7 55*a*	1 21*a*	4.2	5.1	3.4	4.4	0.7	0.1	.....	0.7	2.1	2.2	5.0
31	8 05	1 45	8 06*a*	1 29*a*	2.8	3.2	2.4	3.2	0.6	0.1	.....	0.6	1.4	1.5	5.0
32	8 30	2 10	8 32*a*	1 54*a*	2.4	2.7	2.0	2.7	0.5	0.1	.....	0.5	1.2	1.2	5.0
33	8 34	2 14	8 36*a*	1 58*a*	2.3	2.7	1.9	2.6	0.5	0.1	.....	0.5	1.2	1.2	5.0
34	9 48	3 33	9 51*a*	3 18*a*	1.8	2.1	1.5	2.1	0.4	0.1	.....	0.4	0.9	1.0	5.0
35	10 58	4 47	11 02*a*	4 31*a*	1.7	2.0	1.5	2.0	0.3	0.1	.....	0.3	0.9	0.9	5.0
36	11 44	5 34	11 48*a*	5 18*a*	1.7	2.0	1.5	2.0	0.3	0.1	.....	0.3	0.9	0.9	5.0
37	11 44	5 34	11 48*a*	5 19*a*	1.6	1.8	1.3	1.8	0.3	0.1	.....	0.3	0.8	0.8	5.0
38	0 26	7 00	0 30*b*	6 45*a*	2.4	2.8	2.0	2.6	0.3	0.1	.....	0.3	1.2	1.3	5.5
39	1 50	8 25	1 54*b*	8 10*a*	2.8	3.2	2.4	3.0	0.3	0.1	.....	0.3	1.4	1.4	5.5
40	3 05	9 40	3 09*b*	9 25*a*	3.0	3.4	2.5	3.2	0.3	0.1	.....	0.3	1.5	1.5	6.0
41	0 19	6 36	0 24*b*	6 21*a*	1.8	2.0	1.5	2.0	0.3	0.1	.....	0.4	0.9	0.9	5.5
42	0 23	6 52	0 28*b*	6 37*a*	1.9	2.2	1.6	2.1	0.3	0.1	.....	0.4	0.9	1.0	5.5
43	0 40	7 00	0 46*b*	6 45*a*	1.7	1.9	1.4	1.9	0.3	0.1	.....	0.4	0.8	0.9	5.5
44	0 43	7 05	0 49*b*	6 50*a*	1.6	1.9	1.4	1.9	0.4	0.1	14 10	0.4	0.8	0.9	5.5
45	1 13	7 35	1 19*b*	7 20*a*	2.2	2.6	1.9	2.5	0.3	0.1	.....	0.4	1.1	1.2	5.5
46	1 31	8 00	1 37*b*	7 45*a*	2.5	2.8	2.1	2.7	0.3	0.1	.....	0.4	1.2	1.3	5.5
47	2 45	9 20	2 51*b*	9 05*a*	3.0	3.5	2.5	3.3	0.3	0.1	.....	0.4	1.5	1.6	5.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST)—Continued.										
	MARYLAND—continued.						*Time meridian, 75° W.*		*Mean Low Water.*		
	Chesapeake Bay, Eastern Shore—Con.	*North.*	*West.*								
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Fishing Point, Fishing Bay	38 18	76 01	5 04	Old Point Comfort	105	+5 15	+5 46	0.0	0.0	1.00
2	Hooper Strait Light	38 14	76 05	5 04	Baltimore	97	−5 17	−5 31	+0.5	0.0	1.47
3	Hooper Island Light	38 15	76 15	5 05	Baltimore	97	−5 12	−5 27	+0.4	0.0	1.38
4	Barren Island	38 20	76 16	5 05	Baltimore	97	−4 58	−5 12	+0.4	0.0	1.33
5	Sharps Island Light	38 38	76 23	5 06	Baltimore	97	−3 55	−4 10	+0.1	0.0	1.12
6	Choptank River Light	38 39	76 11	5 05	Baltimore	97	−3 41	−3 45	+0.2	0.0	1.22
7	Cambridge, Choptank River	38 34	76 04	5 04	Baltimore	97	−3 09	−3 03	+0.5	0.0	1.41
8	Dover Ferry, Choptank River	38 45	76 00	5 04	Washington	101	−2 34	−2 27	−0.8	0.0	0.71
9	Denton, Choptank River	38 53	75 51	5 03	Washington	101	−1 09	−1 01	−0.7	0.0	0.77
10	Oxford, Tred Avon River	38 41	76 10	5 05	Baltimore	97	−3 34	−3 36	+0.3	0.0	1.28
11	Easton Point, Tred Avon River	38 46	76 06	5 04	Baltimore	97	−3 03	−2 58	+0.5	0.0	1.41
12	Bozman, Broad Creek	38 46	76 15	5 05	Baltimore	97	−3 24	−3 22	+0.4	0.0	1.33
13	Poplar Island	38 46	76 23	5 06	Baltimore	97	−3 13	−3 29	0.0	0.0	1.00
14	Tilghmans Point, Eastern Bay	38 52	76 15	5 05	Baltimore	97	−2 55	−3 07	0.0	0.0	0.97
15	St. Michaels, Miles River	38 47	76 13	5 05	Baltimore	97	−2 36	−2 42	+0.1	0.0	1.12
16	Bloody Point Bar Light	38 50	76 24	5 06	Baltimore	97	−2 50	−3 05	−0.1	0.0	0.95
17	Love Point Light	39 03	76 17	5 05	Baltimore	97	−1 12	−1 27	−0.1	0.0	0.91
18	Queenstown, Chester River	38 59	76 10	5 05	Baltimore	97	−0 43	−0 52	+0.2	0.0	1.14
19	Chestertown, Chester River	39 12	76 04	5 04	Washington	101	−0 35	−0 40	−0.9	0.0	0.68
20	Tolchester Beach	39 13	76 15	5 05	Baltimore	97	+0 19	+0 08	+0.1	0.0	1.12
21	Betterton, Sassafras River	39 22	76 04	5 04	Washington	101	+0 22	+0 06	−1.0	0.0	0.66
22	Georgetown, Sassafras River	39 22	75 58	5 04	Washington	101	+0 58	+0 45	−0.5	0.0	0.82
23	Turkey Point Light, Elk River	39 27	76 01	5 04	Washington	101	+0 34	+0 20	−0.8	0.0	0.73
24	Town Point Wharf, Elk River	39 30	75 55	5 04	Washington	101	+0 52	+0 35	−0.5	0.0	0.82
25	Chesapeake, Back Creek, Elk River	39 32	75 49	5 03	Washington	101	+1 03	+0 48	−0.2	0.0	0.92
26	Elkton Landing, Elk River	39 36	75 50	5 03	Washington	101	+1 09	+0 54	−0.2	0.0	0.92
27	Charlestown, Northeast River	39 34	75 58	5 04	Washington	101	+1 07	+0 55	−0.3	0.0	0.89
	Chesapeake Bay, Western Shore.										
28	Havre de Grace, Susquehanna River	39 32	76 05	5 04	Washington	101	+1 22	+1 32	−0.7	0.0	0.75
29	Port Deposit, Susquehanna River	39 36	76 07	5 04	Washington	101	+1 42	+1 50	−0.7	0.0	0.75
30	Fishing Battery Light	39 30	76 05	5 04	Washington	101	+1 07	+1 07	−0.7	0.0	0.75
31	Wilson Point, Bush River	39 23	76 16	5 06	Baltimore	97	+1 18	+1 03	+0.4	0.0	1.33
32	Pooles Island Light	39 17	76 16	5 05	Baltimore	97	+0 46	+0 30	+0.1	0.0	1.07
33	Battery Point, Gunpowder River	39 20	76 20	5 05	Baltimore	97	+0 55	+0 48	+0.1	0.0	1.07
34	Bowleys Bar Point, Middle River	39 18	76 23	5 06	Baltimore	97	+0 43	+0 29	0.0	0.0	1.03
35	Rocky Point, Back River	39 15	76 24	5 06	Baltimore	97	+0 38	+0 23	0.0	0.0	0.98
36	Seven Foot Knoll Light	39 09	76 25	5 06	Baltimore	97	−0 14	−0 29	−0.2	0.0	0.81
37	North Point, Patapsco River	39 12	76 27	5 06	Baltimore	97	−0 10	−0 18	−0.1	0.0	0.88
38	Fort Carroll, Patapsco River	39 13	76 31	5 06	Baltimore	97	−0 06	−0 06	0.0	0.0	0.98
39	Fort McHenry, Patapsco River	39 16	76 35	5 06	Baltimore	97	−0 02	−0 02	0.0	0.0	0.98
40	BALTIMORE, FELLS POINT	39 17	76 35	5 06	Baltimore	97	0 00	0 00	0.0	0.0	1.00
41	Persimmon Point, Magothy River	39 03	76 26	5 06	Baltimore	97	−1 11	−1 26	−0.3	0.0	0.71
42	Sandy Point Light	39 01	76 23	5 06	Baltimore	97	−1 29	−1 45	−0.3	0.0	0.71
43	Greenbury Point Shoal Light	38 58	76 27	5 06	Baltimore	97	−1 54	−2 11	−0.3	0.0	0.71
44	Annapolis, Severn River	38 58	76 29	5 06	Baltimore	97	−1 52	−2 09	−0.3	0.0	0.74
45	Bay Ridge	38 56	76 27	5 06	Baltimore	97	−2 10	−2 26	−0.3	0.0	0.72
46	Thomas Point Shoal Light	38 54	76 26	5 06	Baltimore	97	−2 25	−2 41	−0.3	0.0	0.74
47	Ferry Point, South River	38 57	76 32	5 06	Baltimore	97	−2 15	−2 30	−0.3	0.0	0.78
48	Galloway, West River	38 50	76 32	5 06	Baltimore	97	−2 29	−2 37	−0.3	0.0	0.78
49	Fairhaven, Herring Bay	38 45	76 33	5 06	Baltimore	97	−3 19	−3 34	−0.3	0.0	0.78
50	Chesapeake Beach	38 41	76 32	5 06	Baltimore	97	−3 40	−3 55	−0.3	0.0	0.78
51	Cove Point Light	38 23	76 23	5 06	Baltimore	97	−4 48	−5 03	0.0	0.0	0.98
52	Drum Point Light, Patuxent River	38 19	76 25	5 06	Baltimore	97	−4 59	−5 16	0.0	0.0	1.03
53	Benedict, Patuxent River	38 30	76 40	5 07	Baltimore	97	−3 58	−3 58	+0.5	0.0	1.41
54	Nottingham, Patuxent River	38 43	76 42	5 07	Washington	101	−4 13	−4 03	−0.3	0.0	0.89
55	Cedar Point Light	38 18	76 22	5 05	Baltimore	97	−5 03	−5 19	+0.1	0.0	1.06
56	Point No Point Light	38 08	76 18	5 05	Baltimore	97	−5 36	−5 52	+0.2	0.0	1.14
	MARYLAND, VIRGINIA, AND DISTRICT OF COLUMBIA.										
	Potomac River.										
57	Point Lookout Light, Md	38 02	76 19	5 05	Old Point Comfort	105	+4 16	+4 41	−1.2	0.0	0.53
58	Travis Point, Coan River, Va	38 00	76 28	5 06	Old Point Comfort	105	+4 25	+4 51	−1.1	0.0	0.57
59	Lynch Point, Yeocomico River, Va.	38 03	76 31	5 06	Old Point Comfort	105	+4 37	+5 08	−1.0	0.0	0.61
60	Kinsale, Yeocomico River, Va	38 02	76 35	5 06	Old Point Comfort	105	+4 47	+5 13	−1.2	0.0	0.54
61	Kitts Point, St. Mary River, Md	38 06	76 25	5 06	Old Point Comfort	105	+4 34	+5 00	−1.0	0.0	0.60

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	1 35	8 02	1 41b	7 47a	2.5	2.9	2.1	2.8	0.3	0.2	.....	0.4	1.3	1.3	5.5
2	1 19	7 42	1 31b	7 27a	1.7	2.0	1.4	2.0	0.3	0.2	.....	0.4	0.8	0.9	5.5
3	1 23	7 45	1 38b	7 30a	1.6	1.8	1.3	1.9	0.3	0.3	.....	0.4	0.8	0.9	5.5
4	1 37	8 00	1 54b	7 44a	1.5	1.8	1.3	1.9	0.3	0.4	.....	0.5	0.8	1.0	5.5
5	2 39	9 01	3 01b	8 44a	1.3	1.5	1.1	1.7	0.3	0.4	18 35	0.6	0.6	0.9	5.5
6	2 54	9 27	3 14b	9 10a	1.4	1.6	1.2	1.8	0.3	0.4	.....	0.5	0.7	0.9	6.0
7	3 27	10 10	3 45b	9 53a	1.6	1.9	1.4	2.0	0.3	0.4	.....	0.5	0.8	1.0	5.5
8	5 19	12 08	5 35b	11 46a	2.0	2.3	1.7	2.4	0.3	0.4	.....	0.5	1.0	1.2	6.0
9	6 45	1 05	7 00b	0 48b	2.2	2.5	1.8	2.6	0.3	0.4	.....	0.5	1.1	1.3	6.0
10	3 01	9 36	3 21b	9 19a	1.5	1.7	1.2	1.9	0.4	0.4	.....	0.6	0.7	1.0	6.0
11	3 33	10 15	3 50b	9 58a	1.6	1.9	1.4	2.0	0.4	0.4	.....	0.6	0.8	1.0	6.0
12	3 11	9 50	3 28b	9 33a	1.5	1.8	1.3	1.9	0.4	0.4	.....	0.6	0.8	1.0	6.0
13	3 21	9 42	3 33b	9 22a	1.2	1.3	1.0	1.6	0.5	0.4	.....	0.6	0.6	0.8	6.0
14	3 40	10 05	3 57b	9 47a	1.1	1.3	0.9	1.6	0.5	0.4	.....	0.6	0.6	0.8	6.0
15	3 59	10 30	4 16b	9 14a	1.3	1.5	1.1	1.7	0.5	0.4	.....	0.6	0.6	0.8	6.0
16	3 44	10 06	4 04b	9 36a	1.1	1.3	0.9	1.6	0.6	0.4	.....	0.7	0.6	0.7	6.0
17	5 23	11 45	5 40b	11 10a	1.1	1.2	0.9	1.6	0.8	0.3	19 40	0.9	0.5	0.7	6.0
18	5 52	12 20	6 09b	11 50a	1.3	1.5	1.1	1.9	0.8	0.3	.....	0.9	0.7	0.8	6.0
19	7 18	1 25	7 35b	1 00b	1.9	2.2	1.6	2.5	0.8	0.3	.....	0.9	1.0	1.1	6.0
20	6 54	0 50	7 09b	0 15b	1.3	1.5	1.1	1.9	0.9	0.3	.....	1.0	0.6	0.8	6.0
21	8 15	2 11	8 27b	1 41b	1.9	2.2	1.6	2.6	1.0	0.3	.....	1.0	1.0	1.1	6.0
22	8 51	2 50	9 00b	2 25b	2.3	2.7	2.0	3.0	1.0	0.3	.....	1.0	1.2	1.3	6.5
23	8 27	2 25	8 37b	1 55b	2.1	2.4	1.8	2.8	1.1	0.3	.....	1.1	1.0	1.2	6.0
24	8 45	2 40	8 54b	2 15b	2.3	2.7	2.0	3.0	1.0	0.3	.....	1.0	1.2	1.3	6.0
25	8 57	2 54	9 06b	2 34b	2.6	3.0	2.2	3.3	1.0	0.3	.....	1.0	1.3	1.5	6.0
26	9 03	3 00	9 11b	2 40b	2.6	3.0	2.2	3.3	1.0	0.3	.....	1.0	1.3	1.5	6.0
27	9 00	3 00	9 08b	2 35b	2.5	2.9	2.1	3.2	1.0	0.3	.....	1.0	1.3	1.4	6.0
28	9 15	3 35	9 25b	3 10b	2.1	2.5	1.8	2.8	0.9	0.3	.....	1.0	1.1	1.2	6.0
29	9 35	3 55	9 44b	3 35b	2.1	2.5	1.8	2.8	0.9	0.3	.....	1.0	1.1	1.2	6.0
30	9 00	3 12	9 11b	2 42b	2.1	2.5	1.8	2.8	0.9	0.3	.....	1.0	1.1	1.2	6.0
31	7 53	1 50	8 05b	1 15b	1.5	1.8	1.3	2.1	0.9	0.3	.....	1.0	0.8	0.9	6.0
32	7 21	1 17	7 34b	0 35b	1.2	1.4	1.0	1.8	0.9	0.3	20 56	0.9	0.6	0.8	6.0
33	7 30	1 35	7 43b	1 00b	1.2	1.4	1.0	1.8	0.8	0.3	.....	0.9	0.6	0.8	6.0
34	7 17	1 15	7 30b	0 45b	1.2	1.4	1.0	1.8	0.8	0.3	.....	0.9	0.6	0.8	6.0
35	7 12	1 09	7 26b	0 43b	1.1	1.3	1.0	1.7	0.8	0.3	.....	0.9	0.6	0.7	6.0
36	6 20	0 17	6 37b	0 00b	0.9	1.1	0.8	1.5	0.7	0.3	20 23	0.8	0.5	0.6	6.0
37	6 24	0 33	6 40b	0 16b	1.0	1.2	0.9	1.5	0.7	0.4	.....	0.8	0.5	0.7	6.0
38	6 28	0 40	6 43b	0 21b	1.1	1.3	1.0	1.7	0.7	0.4	.....	0.8	0.6	0.8	6.0
39	6 32	0 44	6 46b	0 24b	1.1	1.3	1.0	1.7	0.7	0.4	.....	0.8	0.6	0.8	6.0
40	6 34	0 46	6 45b	0 26b	1.2	1.3	1.0	1.7	0.7	0.4	21 12	0.8	0.6	0.8	6.0
41	5 23	11 45	5 40b	11 25a	0.8	0.9	0.7	1.3	0.6	0.4	.....	0.7	0.4	0.6	6.0
42	5 05	11 26	5 22b	11 06a	0.8	0.9	0.7	1.3	0.6	0.4	.....	0.7	0.4	0.6	6.0
43	4 40	11 00	4 57b	10 40a	0.8	0.9	0.7	1.3	0.5	0.4	.....	0.7	0.4	0.6	6.0
44	4 42	11 02	4 59b	10 42a	0.9	1.0	0.7	1.3	0.5	0.4	.....	0.6	0.4	0.6	6.0
45	4 24	10 45	4 44b	10 20a	0.8	1.0	0.7	1.3	0.5	0.4	.....	0.6	0.4	0.6	6.0
46	4 09	10 30	4 39b	9 57a	0.9	1.0	0.7	1.3	0.5	0.4	19 21	0.6	0.4	0.6	6.0
47	4 19	10 41	4 44b	10 11a	0.9	1.0	0.8	1.3	0.4	0.4	.....	0.6	0.4	0.6	6.0
48	4 05	10 34	4 30b	10 09a	0.9	1.0	0.8	1.3	0.4	0.4	.....	0.6	0.4	0.6	6.0
49	3 15	9 37	3 39b	9 17a	0.9	1.0	0.8	1.3	0.4	0.4	.....	0.5	0.4	0.6	.5
50	2 54	9 16	3 16b	8 58a	0.9	1.0	0.8	1.3	0.4	0.4	.....	0.5	0.4	0.6	5.5
51	1 46	8 08	2 04b	7 54a	1.1	1.3	1.0	1.4	0.3	0.3	.....	0.4	0.6	0.7	5.5
52	1 35	7 55	1 52b	7 42a	1.2	1.4	1.0	1.5	0.2	0.3	17 14	0.4	0.6	0.8	5.0
53	2 35	9 12	2 50b	8 59a	1.6	1.9	1.4	1.9	0.2	0.3	.....	0.4	0.8	1.0	5.5
54	3 37	10 24	3 49b	10 11a	2.5	2.9	2.1	2.8	0.2	0.3	.....	0.4	1.3	1.4	5.5
55	1 32	7 58	1 49b	7 40a	1.2	1.4	1.0	1.5	0.2	0.3	.....	0.4	0.6	0.8	5.0
56	0 59	7 20	1 08b	7 06a	1.3	1.5	1.1	1.6	0.3	0.2	.....	0.4	0.7	0.8	5.0
57	0 35	6 56	0 39b	6 42a	1.3	1.5	1.1	1.5	0.3	0.1	.....	0.3	0.7	0.7	5.0
58	0 43	7 05	0 47b	6 51a	1.4	1.7	1.2	1.6	0.3	0.1	.....	0.3	0.7	0.8	5.0
59	0 55	7 17	0 59b	7 03a	1.5	1.8	1.3	1.7	0.3	0.1	.....	0.3	0.8	0.8	5.0
60	1 06	7 27	1 09b	7 13a	1.4	1.6	1.1	1.5	0.3	0.1	.....	0.3	0.7	0.7	5.0
61	0 52	7 14	0 56b	7 00a	1.5	1.7	1.3	1.7	0.3	0.1	.....	0.3	0.8	0.8	5.0

Number.	Station.	Geographic position. Latitude.	Geographic position. Longitude. Arc.	Geographic position. Longitude. Time.	Standard port for reference. Name.	Standard port for reference. Page.	Tidal differences. Time. HW.	Tidal differences. Time. LW.	Tidal differences. Height. HW.	Tidal differences. Height. LW.	Ratio of ranges.
	NORTH AMERICA (EAST COAST)—Continued.										
	MARYLAND, VIRGINIA, AND DISTRICT OF COLUMBIA—continued.										
	Potomac River—Continued.	*North.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	St. Marys City, St. Mary River, Md.	38 11	76 26	5 06	Old Point Comfort	105	+ 4 52	+ 5 18	−1.0	0.0	0.60
2	Piney Point Light, Md	38 08	76 32	5 06	Washington	101	− 6 46	− 7 01	−1.2	0.0	0.57
3	Coles Point, Va	38 09	76 38	5 07	Washington	101	− 6 32	− 6 47	−1.1	0.0	0.62
4	Kaywood Point, Breton Bay, Md	38 14	76 42	5 07	Washington	101	− 6 20	− 6 35	−1.0	0.0	0.65
5	Leonardtown, Breton Bay, Md	38 17	76 38	5 07	Washington	101	− 6 13	− 6 25	−1.2	0.0	0.59
6	Compton, St. Clement Bay, Md	38 16	76 42	5 07	Washington	101	− 6 10	− 6 22	−1.1	0.0	0.62
7	Blakistone Island Light, Md	38 12	76 45	5 07	Washington	101	− 6 14	− 6 29	−1.0	0.0	0.66
8	Cob Pt. Bar Lt., Wicomico R., Md	38 15	76 50	5 07	Washington	101	− 6 00	− 6 15	−1.0	0.0	0.66
9	Blakistone, Wicomico River, Md	38 17	76 48	5 07	Washington	101	− 5 56	− 6 11	−1.0	0.0	0.66
10	Colonial Beach, Va	38 15	76 58	5 08	Washington	101	− 5 44	− 5 58	−1.1	0.0	0.60
11	Lower Cedar Point Light, Md	38 20	77 00	5 08	Washington	101	− 5 25	− 5 39	−1.4	0.0	0.52
12	Mathias Point, Va	38 24	77 08	5 08	Washington	101	− 4 44	− 4 58	−1.6	0.0	0.43
13	Chapel Point, Port Tobacco R., Md	38 28	77 02	5 08	Washington	101	− 4 31	− 4 44	−1.4	0.0	0.52
14	Upper Cedar Point Light, Md	38 24	77 05	5 08	Washington	101	− 4 30	− 4 43	−1.7	0.0	0.41
15	Riverside, Md	38 23	77 09	5 09	Washington	101	− 4 02	− 4 15	−1.7	0.0	0.40
16	Maryland Point Light, Md	38 21	77 12	5 09	Washington	101	− 3 33	− 3 43	−1.7	0.0	0.40
17	Aquia Creek Entrance, Va	38 24	77 19	5 09	Washington	101	− 2 54	− 3 00	−1.6	0.0	0.43
18	Clifton Beach, Md	38 25	77 16	5 09	Washington	101	− 2 52	− 2 58	−1.6	0.0	0.43
19	Liverpool Point, Md	38 28	77 16	5 09	Washington	101	− 2 25	− 2 32	−1.6	0.0	0.45
20	Quantico Creek Entrance, Va	38 32	77 17	5 09	Washington	101	− 1 57	− 2 03	−1.4	0.0	0.50
21	Deep Point, Mattawoman Cr., Md	38 34	77 13	5 09	Washington	101	− 1 34	− 1 40	−1.3	0.0	0.55
22	High Point, Occoquan Creek, Va	38 37	77 12	5 09	Washington	101	− 1 23	− 1 27	−1.2	0.0	0.57
23	Indian Head, Md	38 36	77 10	5 09	Washington	101	− 1 15	− 1 20	−1.2	0.0	0.59
24	Glymont, Md	38 37	77 08	5 09	Washington	101	− 1 09	− 1 13	−1.1	0.0	0.62
25	Marshall Hall, Md	38 41	77 06	5 08	Washington	101	− 0 44	− 0 46	−0.7	0.0	0.75
26	Mount Vernon, Va	38 42	77 05	5 08	Washington	101	− 0 41	− 0 43	−0.7	0.0	0.77
27	Fort Washington, Md	38 43	77 02	5 08	Washington	101	− 0 31	− 0 33	−0.4	0.0	0.85
28	River View, Md	38 43	77 02	5 08	Washington	101	− 0 27	− 0 29	−0.4	0.0	0.87
29	Alexandria, Va	38 48	77 02	5 08	Washington	101	− 0 13	− 0 14	0.0	0.0	0.99
30	Giesboro Point, D. C	38 51	77 01	5 08	Washington	101	− 0 04	− 0 04	0.0	0.0	1.00
31	Arsenal Wharf, D. C	38 52	77 01	5 08	Washington	101	− 0 02	− 0 02	0.0	0.0	1.00
32	WASHINGTON, Seventh street, D. C	38 53	77 01	5 08	Washington	101	0 00	0 00	0.0	0.0	1.00
33	Navy-Yard, Anacostia River, D. C	38 52	77 00	5 08	Washington	101	+ 0 03	+ 0 03	0.0	0.0	1.01
34	Benning Br., Anacostia R., D. C	38 54	76 58	5 08	Washington	101	+ 0 11	+ 0 11	0.0	0.0	1.01
35	Gravelly Point, Va	38 52	77 02	5 08	Washington	101	− 0 01	− 0 01	0.0	0.0	1.00
36	Aqueduct Bridge, D. C	38 54	77 04	5 08	Washington	101	+ 0 07	+ 0 07	0.0	0.0	0.99
37	Mankins Fishery, D. C	38 55	77 06	5 08	Washington	101	+ 0 11	+ 0 11	0.0	0.0	0.99
38	Chain Bridge, D. C	38 56	77 07	5 08	Washington	101	+ 0 15	+ 0 15	−0.1	0.0	0.98
	VIRGINIA—continued.										
	Chesapeake Bay, Western Shore.										
39	Smith Point Light	37 58	76 11	5 05	Old Point Comfort	105	+ 3 34	+ 3 55	−1.4	0.0	0.46
40	Great Wicomico River Light	37 48	76 16	5 05	Old Point Comfort	105	+ 3 05	+ 3 24	−1.4	0.0	0.43
41	Dividing Creek	37 44	76 18	5 05	Old Point Comfort	105	+ 2 41	+ 3 00	−1.5	0.0	0.42
42	Stingray Point Light	37 34	76 16	5 05	Old Point Comfort	105	+ 1 36	+ 1 52	−1.4	0.0	0.46
43	Orchard Point, Rappahannock R	37 39	76 27	5 06	Old Point Comfort	105	+ 2 01	+ 2 30	−1.1	0.0	0.56
44	Urbana, Rappahannock River	37 38	76 34	5 06	Old Point Comfort	105	+ 2 17	+ 2 54	−1.0	0.0	0.61
45	Bowlers Rock Lt., Rappahannock R.	37 49	76 44	5 07	Old Point Comfort	105	+ 3 28	+ 4 19	−0.7	0.0	0.71
46	Tappahannock, Rappahannock R	37 56	76 52	5 07	Old Point Comfort	105	+ 4 32	+ 5 23	−0.9	0.0	0.65
47	Leedstown, Rappahannock River	38 07	77 00	5 08	Old Point Comfort	105	+ 6 39	+ 7 29	−1.1	0.0	0.57
48	Green Bay, Rappahannock River	38 09	77 05	5 08	Old Point Comfort	105	+ 7 49	+ 8 43	−0.8	0.0	0.67
49	Port Royal, Rappahannock River	38 10	77 11	5 09	Old Point Comfort	105	+ 8 35	+ 9 29	−0.6	0.0	0.75
50	Corbins Neck, Rappahannock R	38 13	77 17	5 09	Old Point Comfort	105	+ 9 50	+10 51	+0.1	0.0	1.02
51	Fredericksburg, Rappahannock R.	38 18	77 27	5 10	Old Point Comfort	105	+10 24	+11 34	+0.3	0.0	1.10
52	Cherry Point, Piankatank River	37 31	76 19	5 05	Old Point Comfort	105	+ 1 16	+ 1 31	−1.3	0.0	0.48
53	Horse Point, Piankatank River	37 32	76 24	5 06	Old Point Comfort	105	+ 1 49	+ 2 06	−1.1	0.0	0.56
54	Wolf Trap Light	37 23	76 11	5 05	Old Point Comfort	105	+ 0 28	+ 0 40	−1.0	0.0	0.60
55	New Pt. Comfort Lt., Mobjack Bay	37 18	76 17	5 05	Old Point Comfort	105	+ 0 09	+ 0 18	−0.8	0.0	0.69
56	East River Entrance, Mobjack Bay	37 22	76 21	5 05	Old Point Comfort	105	+ 0 16	+ 0 25	−0.8	0.0	0.68
57	York Spit Light	37 13	76 15	5 05	Old Point Comfort	105	+ 0 04	+ 0 09	−0.5	0.0	0.81
58	Tue Marshes Light, York River	37 14	76 23	5 06	Old Point Comfort	105	+ 0 13	+ 0 20	−0.3	0.0	0.87
59	Quarter Point, York River	37 15	76 27	5 06	Old Point Comfort	105	+ 0 21	+ 0 29	−0.2	0.0	0.91
60	Yorktown, York River	37 14	76 30	5 06	Old Point Comfort	105	+ 0 27	+ 0 36	−0.1	0.0	0.94
61	Mumford Island, York River	37 16	76 31	5 06	Old Point Comfort	105	+ 0 33	+ 0 43	−0.1	0.0	0.98
62	Capahosic, York River	37 23	76 38	5 07	Old Point Comfort	105	+ 1 03	+ 1 21	+0.3	0.0	1.13
63	Moodys Wharf, York River	37 25	76 42	5 07	Old Point Comfort	105	+ 1 16	+ 1 38	+0.5	0.0	1.21

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	1 10	7 32	1 14b	7 18a	1.5	1.7	1.3	1.6	0.3	0.1	.....	0.3	0.8	0.8	5.0
2	1 05	7 27	1 08b	7 33b	1.6	1.9	1.4	1.8	0.3	0.1	.....	0.3	0.8	0.9	5.0
3	1 18	7 40	1 21b	7 51b	1.8	2.0	1.5	1.9	0.4	0.1	.....	0.4	0.9	0.9	5.0
4	1 30	7 52	1 33b	8 03b	1.9	2.1	1.6	2.0	0.4	0.1	.....	0.4	0.9	1.0	5.0
5	1 37	8 02	1 40b	8 13b	1.7	2.0	1.4	1.9	0.3	0.1	.....	0.3	0.8	0.9	5.0
6	1 40	8 05	1 43b	8 16b	1.8	2.0	1.5	1.9	0.4	0.1	.....	0.4	0.9	0.9	5.0
7	1 36	7 58	1 39b	8 09b	1.9	2.2	1.6	2.1	0.4	0.1	.....	0.4	1.0	1.0	5.0
8	1 50	8 12	1 53b	8 23b	1.9	2.2	1.6	2.0	0.4	0.1	.....	0.4	0.9	1.0	5.0
9	1 54	8 16	1 56b	8 27b	1.9	2.2	1.6	2.1	0.4	0.1	.....	0.4	1.0	1.0	5.0
10	2 05	8 28	2 07b	8 39b	1.7	2.0	1.4	1.9	0.3	0.1	.....	0.3	0.9	0.9	5.0
11	2 24	8 47	2 26b	8 58b	1.5	1.7	1.3	1.6	0.3	0.1	.....	0.3	0.8	0.8	5.0
12	3 05	9 28	3 07b	9 39b	1.2	1.4	1.0	1.4	0.2	0.1	.....	0.2	0.6	0.7	5.0
13	3 18	9 42	3 20b	9 53b	1.5	1.7	1.3	1.6	0.3	0.1	.....	0.3	0.8	0.8	5.0
14	3 19	9 43	3 21b	9 54b	1.2	1.4	1.0	1.3	0.2	0.1	.....	0.2	0.6	0.6	5.0
15	3 46	10 10	3 47b	10 21b	1.1	1.3	1.0	1.2	0.2	0.1	.....	0.2	0.6	0.6	5.0
16	4 15	10 42	4 16b	10 53b	1.1	1.3	1.0	1.2	0.2	0.1	.....	0.2	0.6	0.6	5.0
17	4 54	11 25	4 55b	11 36b	1.2	1.4	1.0	1.3	0.2	0.1	.....	0.2	0.6	0.7	5.0
18	4 56	11 27	4 57b	11 38b	1.2	1.4	1.0	1.3	0.2	0.1	.....	0.2	0.6	0.7	5.0
19	5 28	11 58	5 28b	12 04b	1.3	1.5	1.1	1.4	0.3	0.1	.....	0.3	0.6	0.7	5.0
20	5 51	12 22	5 51b	12 33b	1.4	1.6	1.2	1.5	0.3	0.1	.....	0.3	0.7	0.8	5.0
21	6 14	0 20	6 13b	0 31a	1.6	1.8	1.3	1.7	0.3	0.1	.....	0.3	0.8	0.8	5.0
22	6 25	0 33	6 24b	0 44a	1.6	1.9	1.4	1.8	0.3	0.1	.....	0.3	0.8	0.9	5.0
23	6 33	0 40	6 32b	0 51a	1.7	2.0	1.4	1.9	0.3	0.1	.....	0.3	0.8	0.9	5.0
24	6 39	0 47	6 38b	0 58a	1.8	2.0	1.5	1.9	0.4	0.1	.....	0.4	0.9	0.9	5.0
25	7 05	1 15	7 04b	1 26a	2.1	2.5	1.8	2.3	0.4	0.1	.....	0.4	1.1	1.1	5.0
26	7 08	1 18	7 07b	1 29a	2.2	2.5	1.8	2.4	0.4	0.1	.....	0.4	1.1	1.2	5.0
27	7 18	1 28	7 17b	1 39a	2.4	2.8	2.0	2.6	0.5	0.1	.....	0.5	1.2	1.3	5.0
28	7 22	1 32	7 20b	1 43a	2.5	2.9	2.1	2.7	0.5	0.2	.....	0.5	1.2	1.3	5.0
29	7 36	1 47	7 34b	1 58a	2.8	3.3	2.4	3.1	0.6	0.2	.....	0.6	1.4	1.5	5.0
30	7 45	1 57	7 43b	2 08a	2.9	3.3	2.4	3.1	0.6	0.2	.....	0.6	1.4	1.5	5.0
31	7 47	1 59	7 45b	2 10a	2.9	3.3	2.4	3.1	0.6	0.2	.....	0.6	1.4	1.5	5.0
32	7 49	2 01	7 47b	2 12a	2.9	3.3	2.4	3.1	0.6	0.2	19 16	0.6	1.4	1.5	5.0
33	7 52	2 04	7 50b	2 15a	2.9	3.3	2.4	3.2	0.6	0.2	19 34	0.6	1.4	1.5	5.0
34	8 00	2 12	7 58b	2 23a	2.9	3.3	2.4	3.2	0.6	0.2	.....	0.6	1.4	1.5	5.0
35	7 48	2 00	7 46b	2 11a	2.9	3.3	2.4	3.1	0.6	0.2	.....	0.6	1.4	1.5	5.0
36	7 56	2 08	7 54b	2 19a	2.8	3.3	2.4	3.1	0.6	0.2	.....	0.6	1.4	1.5	5.0
37	8 00	2 12	7 58b	2 23a	2.8	3.2	2.4	3.1	0.6	0.2	.....	0.6	1.4	1.5	5.0
38	8 04	2 16	8 02b	2 27a	2.8	3.2	2.4	3.1	0.6	0.2	.....	0.6	1.4	1.5	5.0
39	12 18	6 10	12 22a	5 56a	1.2	1.3	1.0	1.4	0.3	0.1	.....	0.3	0.6	0.6	5.0
40	11 49	5 39	11 52a	5 24a	1.1	1.2	0.9	1.3	0.3	0.1	12 00	0.3	0.5	0.6	5.0
41	11 25	5 15	11 29a	4 59a	1.1	1.2	0.9	1.3	0.3	0.1	.....	0.3	0.5	0.6	5.0
42	10 20	4 07	10 24a	3 50a	1.2	1.3	1.0	1.4	0.3	0.1	11 08	0.3	0.6	0.6	5.0
43	10 44	4 44	10 47a	4 28a	1.4	1.6	1.2	1.6	0.3	0.1	.....	0.3	0.7	0.8	5.0
44	11 00	5 08	11 03a	4 52a	1.6	1.8	1.3	1.8	0.3	0.1	.....	0.3	0.8	0.8	5.0
45	12 10	6 32	12 12a	6 16a	1.8	2.1	1.5	2.0	0.4	0.1	.....	0.4	0.9	1.0	5.0
46	0 49	7 36	0 51b	7 20a	1.6	1.9	1.4	1.9	0.4	0.1	.....	0.4	0.8	0.9	5.0
47	2 55	9 41	2 57b	9 25a	1.5	1.7	1.2	1.7	0.4	0.1	.....	0.4	0.7	0.8	5.0
48	4 05	10 55	4 07b	10 39a	1.7	2.0	1.4	2.0	0.4	0.1	.....	0.4	0.8	0.9	5.0
49	4 50	11 40	4 52b	11 21a	1.9	2.2	1.6	2.2	0.5	0.1	.....	0.5	1.0	1.0	5.0
50	6 05	0 37	6 07b	0 21b	2.6	3.0	2.2	3.0	0.6	0.1	.....	0.6	1.3	1.4	5.0
51	6 38	1 19	6 40b	1 03b	2.8	3.2	2.4	3.2	0.6	0.1	.....	0.6	1.4	1.5	5.0
52	10 00	3 46	10 03a	3 30a	1.2	1.4	1.0	1.4	0.4	0.1	.....	0.4	0.6	0.6	5.0
53	10 32	4 20	10 35a	4 04a	1.4	1.6	1.2	1.6	0.4	0.1	.....	0.4	0.7	0.7	5.0
54	9 12	2 55	9 14a	2 39a	1.5	1.7	1.3	1.8	0.5	0.1	.....	0.5	0.8	0.8	5.0
55	8 53	2 33	8 55a	2 17a	1.7	2.0	1.5	2.0	0.5	0.1	.....	0.5	0.9	0.9	4.5
56	9 00	2 40	9 02a	2 24a	2.2	2.5	1.8	2.5	0.5	0.1	.....	0.5	1.1	1.2	4.5
57	8 48	2 24	8 50a	2 08a	2.0	2.3	1.7	2.4	0.5	0.1	.....	0.5	1.0	1.1	4.5
58	8 56	2 34	8 58a	2 18a	2.2	2.5	1.8	2.5	0.5	0.1	.....	0.5	1.1	1.1	4.5
59	9 04	2 43	9 06a	2 27a	2.3	2.6	1.9	2.6	0.5	0.1	.....	0.5	1.2	1.2	4.5
60	9 10	2 50	9 12a	2 34a	2.4	2.7	2.0	2.7	0.5	0.1	.....	0.5	1.2	1.2	4.5
61	9 16	2 57	9 18a	2 41a	2.5	2.8	2.1	2.8	0.5	0.1	.....	0.5	1.2	1.3	4.5
62	9 45	3 34	9 47a	3 18a	2.9	3.3	2.4	3.2	0.5	0.1	.....	0.5	1.4	1.5	4.5
63	9 58	3 51	10 00a	3 35a	3.0	3.5	2.6	3.4	0.5	0.1	.....	0.5	1.5	1.6	4.5

Number.	Station.	Geographic position. Latitude.	Longitude. Arc.	Longitude. Time.	Standard port for reference. Name.	Page.	Tidal differences. Time. HW.	Time. LW.	Height. HW.	Height. LW.	Ratio of ranges.
	NORTH AMERICA (EAST COAST)—Continued.										
	VIRGINIA—continued.										
	Chesapeake Bay, Western Shore—Con.	*North.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	West Point, York River	37 32	76 48	5 07	Old Point Comfort	105	+1 43	+2 12	+0.9	0.0	1.35
2	Back River Light	37 05	76 16	5 05	Old Point Comfort	105	+0 01	+0 01	−0.1	0.0	0.95
3	OLD POINT COMFORT	37 00	76 19	5 05	Old Point Comfort	105	0 00	0 00	0.0	0.0	1.00
4	Craney Island Lt., Elizabeth River	36 54	76 20	5 05	Old Point Comfort	105	+0 16	+0 23	+0.1	0.0	1.04
5	Norfolk Navy-Yard, Elizabeth R.	36 50	76 18	5 05	Old Point Comfort	105	+0 32	+0 47	+0.3	0.0	1.11
6	Newport News, James River	36 58	76 26	5 06	Old Point Comfort	105	+0 20	+0 29	+0.1	0.0	1.03
7	Newman Point, Nansemond River	36 52	76 30	5 06	Old Point Comfort	105	+0 35	+0 51	+0.3	0.0	1.12
8	Suffolk Bridge, Nansemond River	36 44	76 35	5 06	Old Point Comfort	105	+1 34	+2 02	+0.9	0.0	1.35
9	Warwick River, James River	37 05	76 33	5 06	Old Point Comfort	105	+1 01	+1 21	0.0	0.0	0.98
10	Hog Point, James River	37 12	76 41	5 07	Old Point Comfort	105	+2 10	+2 39	−0.4	0.0	0.84
11	Jamestown Island, James River	37 12	76 46	5 07	Old Point Comfort	105	+2 53	+3 29	−0.6	0.0	0.77
12	Barrets Pt., Chickahominy River	37 14	76 52	5 07	Old Point Comfort	105	+3 32	+4 14	−0.6	0.0	0.75
13	Mount Airy, Chickahominy River	37 21	76 55	5 08	Old Point Comfort	105	+5 09	+5 58	−0.4	0.0	0.85
14	Windsor Shades, Chickahominy R.	37 25	76 59	5 08	Old Point Comfort	105	+6 29	+7 23	−0.1	0.0	0.96
15	Claremont, James River	37 14	76 58	5 08	Old Point Comfort	105	+4 07	+4 53	−0.5	0.0	0.79
16	Sturgeon Point, James River	37 18	77 00	5 08	Old Point Comfort	105	+4 30	+5 17	−0.4	0.0	0.84
17	Windmill Point, James River	37 18	77 06	5 08	Old Point Comfort	105	+5 14	+6 03	−0.1	0.0	0.94
18	Harrisons Landing, James River	37 19	77 11	5 09	Old Point Comfort	105	+5 38	+6 29	0.0	0.0	1.01
19	Jordan Point, James River	37 19	77 13	5 09	Old Point Comfort	105	+5 50	+6 41	+0.1	0.0	1.05
20	City Point, James River	37 19	77 17	5 09	Old Point Comfort	105	+6 06	+6 59	+0.2	0.0	1.09
21	Petersburg, Appomattox River	37 14	77 24	5 10	Old Point Comfort	105	+7 08	+8 31	+0.4	0.0	1.14
22	Shirley, James River	37 20	77 16	5 09	Old Point Comfort	105	+6 15	+7 08	+0.3	0.0	1.12
23	Picketts Wharf, James River	37 23	77 16	5 09	Old Point Comfort	105	+6 33	+7 27	+0.4	0.0	1.17
24	Curles, James River	37 23	77 18	5 09	Old Point Comfort	105	+6 59	+7 55	+0.6	0.0	1.24
25	Deep Bottom, James River	37 24	77 18	5 09	Old Point Comfort	105	+7 10	+8 07	+0.7	0.0	1.28
26	Dutch Gap, James River	37 23	77 22	5 09	Old Point Comfort	105	+7 28	+8 29	+0.8	0.0	1.33
27	Kingsland Creek, James River	37 24	77 24	5 10	Old Point Comfort	105	+7 43	+8 50	+0.9	0.0	1.37
28	Falling Creek, James River	37 26	77 26	5 10	Old Point Comfort	105	+7 51	+9 04	+1.0	0.0	1.40
29	Richmond Bar, James River	37 29	77 25	5 10	Old Point Comfort	105	+7 59	+9 22	+1.1	0.0	1.43
30	Drewry Island, James River	37 30	77 25	5 10	Old Point Comfort	105	+8 02	+9 31	+1.1	0.0	1.45
31	Richmond, James River	37 32	77 25	5 10	Old Point Comfort	105	+8 04	+9 37	+1.2	0.0	1.46
32	Lynnhaven Inlet	36 54	76 06	5 04	Old Point Comfort	105	−0 27	−0 26	+0.1	0.0	1.05
33	Cape Henry Light	36 56	76 00	5 04	Old Point Comfort	105	−0 45	−0 46	+0.8	0.0	1.13
	Outer Coast.										
34	Virginia Beach	36 50	75 58	5 04	Old Point Comfort	105	−0 55	−0 36	+0.3	0.0	1.12
35	False Cape Life-Saving Station	36 36	75 53	5 04	Old Point Comfort	105	−1 01	−0 43	+0.2	0.0	1.08
	NORTH CAROLINA.										
36	Currituck Beach Light	36 23	75 50	5 03	Old Point Comfort	105	−1 09	−0 51	+0.3	0.0	1.12
37	Oregon Inlet	35 48	75 32	5 02	Old Point Comfort	105	−1 31	−1 13	+0.2	0.0	1.08
38	New Inlet	35 41	75 26	5 02	Old Point Comfort	105	−1 24	−1 07	+0.3	0.0	1.12
39	Hatteras Inlet	35 12	75 44	5 03	Old Point Comfort	105	−1 42	−1 26	−0.5	0.0	0.80
40	Ocracoke Inlet	35 04	76 01	5 04	Old Point Comfort	105	−1 45	−1 31	−0.6	0.0	0.76
41	Cape Lookout	34 36	76 31	5 06	Charleston	113	−1 10	−1 18	−1.5	0.0	0.71
42	Beaufort	34 43	76 39	5 07	Charleston	113	+0 07	+0 10	−2.6	0.0	0.50
43	New River Inlet	34 32	77 20	5 09	Charleston	113	−0 29	−0 19	−2.7	0.0	0.48
44	New Topsail Inlet	34 22	77 38	5 11	Charleston	113	−0 11	+0 09	−2.2	0.0	0.58
45	Masonboro Inlet	34 11	77 49	5 11	Charleston	113	−0 32	−0 42	−1.1	0.0	0.79
46	Carolina Beach	34 02	77 53	5 12	Charleston	113	−0 19	−0 30	−1.0	0.0	0.81
	Cape Fear River and Branches.										
47	Bald Head, Cape Fear Light	33 52	78 00	5 12	Charleston	113	−0 07	−0 19	−0.9	0.0	0.83
48	Fort Caswell	33 54	78 01	5 12	Charleston	113	−0 05	−0 16	−0.8	0.0	0.85
49	Southport or Smithville	33 55	78 01	5 12	Charleston	113	−0 03	−0 13	−0.7	0.0	0.87
50	Federal Point	33 58	77 56	5 12	Charleston	113	+0 24	+0 28	−1.1	0.0	0.79
51	Reeves Point	34 00	77 57	5 12	Charleston	113	+0 39	+0 51	−1.3	0.0	0.75
52	Orton Point Post Light	34 03	77 56	5 12	Charleston	113	+1 03	+1 27	−1.5	0.0	0.71
53	Campbell Island Post Light	34 07	77 56	5 12	Wilmington	109	−0 52	−1 18	+0.8	0.0	1.32
54	Brunswick River Entrance	34 11	77 58	5 12	Wilmington	109	−0 26	−0 39	+0.4	0.0	1.15
55	Hospital Point Post Light	34 12	77 57	5 12	Wilmington	109	−0 19	−0 29	+0.3	0.0	1.11
56	WILMINGTON	34 14	77 57	5 12	Wilmington	109	0 00	0 00	0.0	0.0	1.00
57	Castle Hayne	34 21	77 56	5 12	Wilmington	109	+2 08	+2 11	−0.9	0.0	0.62
58	Bannermans Bridge	34 35	77 46	5 11	Wilmington	109	−5 48	−6 47	−1.1	0.0	0.53
59	Magnolia Quarry	34 52	78 02	5 12	Wilmington	109	+0 53	+1 11	−0.3	0.0	0.86
60	Point Caswell	34 27	78 11	5 13	Wilmington	109	+4 34	+4 50	−1.6	0.0	0.33
61	White Hall	34 30	78 28	5 14	Wilmington	109	−5 45	−5 37	−1.9	0.0	0.21

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	10 25	4 25	10 27a	4 00a	3.4	3.9	2.9	3.7	0.5	0.1	.....	0.5	1.7	1.8	4.5
2	8 45	2 16	8 46a	2 00a	2.4	2.8	2.0	2.8	0.6	0.1	.....	0.6	1.2	1.2	4.5
3	8 44	2 15	8 45a	1 59a	2.5	3.0	2.0	2.9	0.7	0.1	8 58	0.7	1.3	1.3	4.5
4	9 00	2 38	9 01a	2 22a	2.6	3.0	2.1	3.0	0.7	0.1	.....	0.7	1.3	1.3	4.5
5	9 16	3 02	9 17a	2 45a	2.8	3.2	2.3	3.1	0.7	0.1	.....	0.7	1.4	1.4	4.5
6	9 03	2 43	9 04a	2 25a	2.6	3.0	2.1	2.9	0.7	0.1	.....	0.7	1.3	1.3	4.5
7	9 18	3 06	9 19a	2 47a	2.8	3.3	2.3	3.2	0.7	0.1	.....	0.7	1.4	1.4	4.5
8	10 17	4 16	10 18a	3 58a	3.4	4.0	2.8	3.7	0.7	0.1	.....	0.7	1.7	1.7	4.5
9	9 44	3 35	9 45a	3 17a	2.5	2.9	2.0	2.8	0.7	0.1	.....	0.7	1.2	1.3	4.5
10	10 52	4 52	10 53a	4 34a	2.1	2.5	1.7	2.4	0.6	0.1	.....	0.6	1.1	1.1	4.5
11	11 35	5 42	11 36a	5 24a	2.0	2.3	1.6	2.3	0.6	0.1	.....	0.6	1.0	1.0	4.5
12	12 14	6 27	12 15a	6 09a	1.9	2.2	1.5	2.2	0.6	0.1	.....	0.6	1.0	1.0	4.5
13	1 26	8 10	1 26b	7 52a	2.2	2.5	1.7	2.4	0.6	0.1	.....	0.6	1.1	1.1	4.5
14	2 45	9 35	2 45b	9 17a	2.4	2.8	2.0	2.7	0.6	0.1	.....	0.6	1.2	1.2	4.5
15	0 23	7 05	0 23b	6 47a	2.0	2.3	1.6	2.3	0.6	0.1	.....	0.6	1.0	1.0	4.5
16	0 46	7 29	0 45b	7 11a	2.1	2.5	1.8	2.4	0.6	0.1	.....	0.6	1.1	1.1	4.5
17	1 30	8 15	1 29b	7 57a	2.4	2.8	2.0	2.7	0.6	0.1	.....	0.6	1.2	1.2	4.0
18	1 58	8 40	1 52b	8 21a	2.6	2.9	2.1	2.9	0.7	0.1	.....	0.7	1.3	1.3	4.0
19	2 05	8 52	2 03b	8 33a	2.7	3.1	2.2	3.0	0.7	0.2	.....	0.7	1.3	1.4	4.0
20	2 21	9 10	2 19b	8 50a	2.8	3.2	2.3	3.1	0.7	0.2	.....	0.7	1.4	1.4	4.0
21	3 17	10 41	3 15b	10 21a	2.9	3.3	2.4	3.3	0.7	0.2	.....	0.7	1.4	1.5	4.0
22	2 30	9 19	2 28b	8 59a	2.8	3.3	2.4	3.2	0.7	0.2	.....	0.7	1.4	1.5	4.0
23	2 48	9 38	2 45b	9 18a	3.0	3.4	2.5	3.3	0.7	0.2	.....	0.7	1.5	1.5	4.0
24	3 14	10 06	3 11b	9 45a	3.2	3.6	2.7	3.6	0.7	0.3	.....	0.8	1.6	1.7	4.0
25	3 25	10 18	3 21b	9 57a	3.2	3.7	2.8	3.6	0.7	0.3	.....	0.8	1.6	1.7	4.0
26	3 43	10 40	3 29b	10 18a	3.4	3.9	2.9	3.8	0.7	0.3	.....	0.8	1.7	1.8	4.0
27	3 57	11 00	3 52b	10 38a	3.5	4.0	3.0	3.9	0.7	0.3	.....	0.8	1.7	1.8	4.0
28	4 05	11 14	4 00b	10 52a	3.6	4.1	3.0	4.0	0.7	0.3	.....	0.8	1.8	1.9	4.0
29	4 13	11 32	4 08b	11 10a	3.6	4.2	3.1	4.1	0.7	0.3	.....	0.8	1.8	1.9	4.0
30	4 16	11 41	4 10b	11 18a	3.7	4.2	3.2	4.1	0.7	0.3	.....	0.8	1.8	1.9	4.0
31	4 18	11 47	4 12b	11 24a	3.7	4.2	3.2	4.1	0.7	0.4	.....	0.8	1.8	1.9	4.0
32	8 18	1 50	8 19a	1 34a	2.6	3.0	2.2	3.0	0.6	0.1	.....	0.6	1.3	1.4	4.5
33	8 00	1 30	8 01a	1 14a	2.8	3.3	2.4	3.2	0.6	0.1	.....	0.6	1.4	1.5	4.5
34	7 50	1 40	7 51a	1 24a	2.8	3.3	2.2	3.0	0.7	0.1	.....	0.7	1.4	1.4	4.5
35	7 44	1 33	7 45a	1 17a	2.7	3.2	2.1	2.9	0.7	0.1	.....	0.7	1.4	1.4	4.5
36	7 37	1 26	7 38a	1 10a	2.8	3.4	2.2	3.0	0.7	0.1	.....	0.7	1.4	1.4	4.5
37	7 16	1 05	7 17a	0 49a	2.7	3.2	2.1	2.9	0.7	0.1	.....	0.7	1.4	1.4	4.5
38	7 23	1 11	7 24a	0 55a	2.8	3.4	2.2	3.0	0.7	0.1	.....	0.7	1.4	1.4	4.5
39	7 04	0 51	7 06a	0 32a	2.0	2.4	1.6	2.2	0.6	0.1	.....	0.6	1.0	1.0	4.0
40	7 00	0 45	7 06a	0 32a	1.9	2.2	1.5	2.1	0.6	0.1	.....	0.6	1.0	1.0	4.0
41	6 29	0 20	6 34a	0 05a	3.7	4.4	3.0	4.3	0.9	0.3	.....	1.0	1.8	2.0	3.5
42	7 45	1 47	7 51a	1 30a	2.6	3.1	2.1	3.3	0.8	0.3	.....	0.9	1.8	1.5	3.0
43	7 07	1 16	7 12a	1 00a	2.5	3.0	2.0	3.2	0.8	0.2	.....	0.9	1.2	1.3	2.5
44	7 23	1 42	7 28a	1 30a	3.0	3.5	2.5	3.7	0.9	0.3	.....	1.0	1.5	1.7	2.5
45	7 02	0 51	7 07a	0 37a	4.1	4.8	3.3	4.8	1.0	0.4	.....	1.0	2.0	2.2	2.5
46	7 14	1 02	7 19a	0 48a	4.2	4.9	3.4	4.9	1.0	0.4	.....	1.0	2.0	2.2	2.5
47	7 26	1 13	7 31a	0 59a	4.3	5.0	3.5	5.0	1.0	0.4	.....	1.0	2.1	2.3	2.0
48	7 28	1 16	7 33a	1 06a	4.4	5.1	3.6	5.1	1.0	0.4	.....	1.0	2.2	2.3	2.0
49	7 30	1 19	7 34a	1 13a	4.5	5.3	3.7	5.2	1.0	0.4	.....	1.1	2.2	2.4	2.0
50	7 57	2 00	8 00a	1 58a	4.1	4.8	3.3	4.8	1.0	0.4	.....	1.0	2.0	2.2	2.0
51	8 12	2 23	8 14a	2 25a	3.9	4.6	3.1	4.6	1.0	0.4	.....	1.0	2.0	2.1	2.0
52	8 36	2 59	8 37a	3 05a	3.7	4.4	3.0	4.3	0.9	0.3	.....	1.0	1.8	2.0	2.0
53	9 00	3 36	9 00a	3 46a	3.2	3.5	2.8	3.7	1.0	0.2	.....	1.0	1.6	1.8	2.0
54	9 26	4 15	9 25a	4 30a	2.8	3.1	2.5	3.2	0.9	0.1	.....	0.9	1.4	1.6	2.0
55	9 33	4 25	9 31a	4 42a	2.7	3.0	2.4	3.1	0.9	0.1	.....	0.9	1.4	1.5	2.0
56	9 52	4 54	9 50a	5 16a	2.4	2.7	2.2	2.8	0.9	0.1	9 45	0.9	1.2	1.2	2.0
57	12 00	7 05	11 57b	7 34a	1.5	1.7	1.3	1.8	0.7	0.1	.....	0.7	0.8	0.9	2.0
58	4 05	11 40	4 02b	12 09a	1.3	1.4	1.2	1.6	0.6	0.1	.....	0.6	0.6	0.8	2.0
59	10 45	6 05	10 43b	6 29b	2.1	2.3	1.9	2.5	0.8	0.1	.....	0.8	1.0	1.3	2.0
60	2 00	9 33	1 56b	10 11a	0.8	0.9	0.7	1.1	0.5	0.1	.....	0.5	0.4	0.5	2.0
61	4 05	11 40	4 00b	12 30a	0.5	0.6	0.4	0.7	0.4	0.0	.....	0.4	0.2	0.3	2.0

Number.	Station.	Geographic position. Latitude.	Geographic position. Longitude. Arc.	Geographic position. Longitude. Time.	Standard port for reference. Name.	Standard port for reference. Page.	Tidal differences. Time. HW.	Tidal differences. Time. LW.	Tidal differences. Height. HW.	Tidal differences. Height. LW.	Ratio of ranges.
	NORTH AMERICA (EAST COAST)—Continued.										
	SOUTH CAROLINA.	*North.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Little River	33 51	78 34	5 14	Charleston	113	−0 16	−0 29	−0.4	0.0	0.92
2	North Inlet	33 20	79 10	5 17	Charleston	113	−0 18	−0 16	−0.7	0.0	0.87
3	Georgetown Light, Winyah Bay	33 13	79 11	5 17	Charleston	113	+0 09	+0 25	−1.7	0.0	0.67
4	Georgetown, Winyah Bay	33 22	79 17	5 17	Charleston	113	+1 11	+2 11	−1.6	0.0	0.69
5	Cape Romain	33 01	79 21	5 17	Charleston	113	−0 29	−0 37	−0.2	0.0	0.96
6	Bull Bay	32 57	79 38	5 18	Charleston	113	−0 22	−0 36	−0.5	0.0	0.90
7	North Jetty, Charleston Har. Entr.	32 44	79 48	5 19	Charleston	113	−0 16	−0 45	0.0	0.0	1.00
8	Fort Moultrie	32 45	79 52	5 19	Charleston	113	−0 10	−0 27	0.0	0.0	1.00
9	Fort Sumter	32 45	79 52	5 19	Charleston	113	−0 09	−0 25	−0.2	0.0	0.96
10	Fort Johnson	32 45	79 54	5 20	Charleston	113	−0 05	−0 18	−0.2	0.0	0.96
11	Castle Pinckney Light	32 46	79 55	5 20	Charleston	113	−0 01	−0 02	0.0	0.0	1.00
12	CHARLESTON, Custom-House Whf	32 46	79 55	5 20	Charleston	113	0 00	0 00	0.0	0.0	1.00
13	Legareville, Stono River	32 40	80 00	5 20	Charleston	113	0 00	−0 29	−0.2	0.0	0.96
14	North Edisto River Entrance	32 34	80 11	5 21	Charleston	113	−0 16	−0 40	+0.6	0.0	1.12
15	Bluff Point, Wadmelaw River	32 39	80 15	5 21	Charleston	113	+0 16	+0 17	+1.3	0.0	1.25
16	S. Edisto R. Entr., St. Helena Sd	32 29	80 20	5 21	Savannah Entr.	117	+0 59	+0 50	−0.8	0.0	0.89
17	Salt Landing, South Edisto River	32 34	80 28	5 22	Savannah Entr.	117	+1 23	+1 36	−0.7	0.0	0.90
18	Coosaw. R., Mining Co.'s Wharf	32 31	80 40	5 23	Savannah Entr.	117	+2 39	+1 50	+0.7	0.0	1.11
19	Hunting I. Light, St. Helena Sd	32 23	80 25	5 22	Savannah Entr.	117	+1 02	+0 48	−0.8	0.0	0.89
20	Bell Buoy, Port Royal Entrance	32 08	80 35	5 22	Savannah Entr.	117	+0 38	+0 34	−0.4	0.0	0.94
21	Hilton Head, Port Royal Sound	32 14	80 40	5 23	Savannah Entr.	117	+1 01	+1 00	−0.5	0.0	0.93
22	Beaufort River Entrance	52 17	80 39	5 23	Savannah Entr.	117	+1 12	+1 02	−0.1	0.0	0.99
23	Dry Docks, Beaufort River	32 21	80 40	5 23	Savannah Entr.	117	+1 40	+1 30	+0.2	0.0	1.04
24	Port Royal, Battery Creek	32 22	80 41	5 23	Savannah Entr.	117	+1 46	+1 46	+0.3	0.0	1.05
25	Beaufort, Beaufort River	32 26	80 40	5 23	Savannah Entr.	117	+1 59	+2 01	+0.5	0.0	1.08
26	Eutaw Creek, Broad River	32 24	80 48	5 23	Savannah Entr.	117	+1 54	+1 55	+0.1	0.0	1.02
27	Braddock Point, Calibogue Sound	32 07	80 49	5 23	Savannah Entr.	117	+1 04	+1 05	0.0	0.0	1.01
	GEORGIA.										
28	Savannah, Savannah River	32 05	81 05	5 24	Savannah Entr.	117	+2 08	+3 08	−0.3	0.0	0.98
29	Oglethorpe, Savannah River	32 05	81 02	5 24	Savannah Entr.	117	+1 49	+2 38	−0.2	0.0	0.98
							Time meridian, 90° W.				
30	Fort Pulaski	32 02	80 53	5 24	Savannah Entr.	117	+0 08	+0 23	+0.1	0.0	1.02
31	SAVANNAH ENTR., Tybee I. Light	32 02	80 51	5 23	Savannah Entr.	117	0 00	0 00	0.0	0.0	1.00
32	Wassaw Sound	31 55	80 58	5 24	Savannah Entr.	117	+0 14	+0 04	0.0	0.0	1.01
33	Ossabaw Sound	31 50	81 05	5 24	Savannah Entr.	117	+0 09	+0 25	−0.2	0.0	0.98
34	St. Catherine Sound	31 40	81 09	5 25	Savannah Entr.	117	+0 26	+0 28	+0.6	0.0	1.09
35	National Quar. Sta., Sapelo Sound	31 32	81 12	5 25	Savannah Entr.	117	+0 18	+0 04	+0.5	0.0	1.04
36	Sapelo Light, Doboy Sound	31 23	81 17	5 25	Savannah Entr.	117	+0 21	+0 21	+0.4	0.0	1.07
37	Atwood River, Doboy Sound	31 27	81 21	5 25	Savannah Entr.	117	+0 31	+0 31	+0.4	0.0	1.07
38	Altamaha Sound	31 18	81 18	5 25	Savannah Entr.	117	+0 31	+0 41	−0.4	0.0	0.95
39	Brunswick Outer Bar	31 06	81 19	5 25	Savannah Entr.	117	+0 09	+0 10	−0.5	0.0	0.93
40	St. Simon Light	31 08	81 24	5 26	Savannah Entr.	117	+0 22	+0 25	−0.4	0.0	0.95
41	Brunswick	31 09	81 30	5 26	Savannah Entr.	117	+0 52	+0 55	−0.1	0.0	0.99
42	Jekyl Island	31 04	81 25	5 26	Savannah Entr.	117	+0 43	+0 38	0.0	0.0	1.01
43	St. Andrew Sound	31 00	81 28	5 26	Savannah Entr.	117	+0 33	+0 36	0.0	0.0	1.01
	FLORIDA.										
	Eastern Coast.										
44	Fernandina, Fort Clinch	30 41	81 28	5 26	Fernandina	121	−0 14	−0 08	0.0	0.0	0.98
45	FERNANDINA, Dade St.	30 41	81 28	5 26	Fernandina	121	0 00	0 00	0.0	0.0	1.00
46	Nassau Sound	30 31	81 27	5 26	Fernandina	121	−0 19	−0 10	−0.6	0.0	0.90
47	Fort George Inlet	30 26	81 26	5 26	Fernandina	121	−0 17	−0 02	−0.6	0.0	0.90
48	St. Johns River, South Jetty	30 24	81 25	5 26	Fernandina	121	−0 24	−0 09	−1.4	0.0	0.77
49	Mayport, St. Johns River	30 23	81 26	5 26	Fernandina	121	−0 22	−0 03	−1.8	0.0	0.70
50	Hopkins, St. Johns River	30 23	81 30	5 26	Old Point Comfort	105	−1 20	−0 56	+0.5	0.0	1.20
51	Dame Point, St. Johns River	30 23	81 33	5 26	Old Point Comfort	105	−0 53	−0 32	−0.7	0.0	0.72
52	Reddie Point, St. Johns River	30 23	81 37	5 26	Old Point Comfort	105	−0 46	−0 24	−1.1	0.0	0.56
53	Jacksonville, St. Johns River	30 20	81 39	5 27	Old Point Comfort	105	−0 29	−0 12	−1.5	0.0	0.40
54	Mandarin, St. Johns River	30 10	81 39	5 27	Old Point Comfort	105	+0 59	+1 03	−1.8	0.0	0.28
55	Greencove Springs, St. Johns River	29 59	81 41	5 27	Old Point Comfort	105	+2 19	+2 18	−1.9	0.0	0.24
56	Tocoi, St. Johns River	29 51	81 33	5 26	Old Point Comfort	105	+3 43	+3 32	−1.7	0.0	0.32
57	Palatka, St. Johns River	29 39	81 38	5 27	Old Point Comfort	105	+5 21	+5 08	−1.6	0.0	0.36
58	St. Augustine Light	29 53	81 17	5 25	Charleston	113	−0 08	−0 19	−0.7	0.0	0.87
59	St. Augustine	29 54	81 18	5 25	Charleston	113	+0 01	−0 08	−1.0	0.0	0.81
60	Matanzas Inlet	29 42	81 13	5 25	Old Point Comfort	105	−1 48	−1 09	0.0	0.0	1.00
61	Mosquito Inlet Light	29 05	80 56	5 24	Old Point Comfort	105	−1 41	−1 08	−0.2	0.0	0.92
62	Cape Canaveral Light	28 28	80 32	5 22	Charleston	113	−0 23	−0 30	−0.2	0.0	0.96
63	Indian River Inlet	27 30	80 18	5 21	Key West	125	−1 56	−1 17	+0.5	0.0	1.42

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	7 15	1 01	7 19a	0 48a	4.8	5.7	3.9	5.5	1.1	0.4	.....	1.1	2.4	2.5	1.5
2	7 10	1 11	7 15a	0 58a	4.5	5.3	3.7	5.2	1.0	0.4	.....	1.1	2.2	2.4	1.0
3	7 37	1 52	7 42a	1 23a	3.5	4.1	2.8	4:1	0.9	0.3	.....	1.0	1.8	1.9	1.0
4	8 39	3 38	8 44a	1 22a	3.6	4.3	2.9	4.2	0.9	0.3	.....	1.0	1.8	1.9	1.0
5	6 59	0 50	7 03a	0 38a	5.0	5.9	4.1	5.7	1.1	0.4	.....	1.1	2.5	2.7	1.0
6	7 05	0 50	7 09a	0 37a	4.7	5.6	3.8	5.4	1.0	0.4	.....	1.1	2.4	2.5	1.0
7	7 10	0 40	7 14a	0 28a	5.2	6.1	4.2	5.9	1.1	0.4	.....	1.2	2.6	2.8	0.5
8	7 16	0 58	7 20a	0 46a	5.2	6.1	4.2	5.9	1.1	0.4	.....	1.2	2.6	2.8	0.5
9	7 17	1 00	7 21a	0 48a	5.0	5.9	4.1	5.7	1.1	0.4	.....	1.2	2.5	2.7	0.5
10	7 20	1 06	7 24a	0 54a	5.0	5.9	4.1	5.7	1.1	0.4	.....	1.2	2.5	2.7	0.5
11	7 24	1 22	7 28a	1 08a	5.2	6.1	4.2	5.9	1.1	0.4	.....	1.2	2.6	2.8	0.5
12	7 25	1 24	7 29a	1 10a	5.2	6.1	4.2	5.8.	1.1	0.3	8 40	1.2	2.6	2.7	0.5
13	7 25	0 55	7 29a	0 45a	5.0	5.9	4.1	5.7	1.1	0.4	.....	1.1	2.5	2.7	0.5
14	7 08	0 53	7 12a	0 43a	5.8	6.8	4.7	6.6	1.2	0.4	.....	1.2	2.9	3.1	0.5
15	7 40	1 40	7 44a	1 29a	6.5	7.7	5.3	7.3	1.2	0.5	.....	1.3	3.2	3.5	0.0
16	7 12	0 57	7 14a	0 47a	6.0	7.0	4.9	6.5	1.1	0.3	.....	1.1	3.0	3.0	0.0
17	7 35	1 42	7 37a	1 32a	6.1	7.1	4.9	6.6	1.1	0.3	.....	1.1	3.0	3.1	0.0
18	8 50	2 55	8 52a	2 46a	7.5	8.8	6.1	8.0	1.2	0.3	.....	1.3	3.8	3.8	0.0
19	7 14	0 54	7 16a	0 44a	6.0	7.0	4.9	6.5	1.1	0.3	.....	1.1	3.0	3.0	0.0
20	6 50	0 40	6 52a	0 29a	6.4	7.5	5.2	6.8	1.1	0.3	.....	1.2	3.2	3.2	0.0
21	7 12	1 05	7 14a	0 54a	6.3	7.4	5.1	6.8	1.1	0.3	.....	1.2	3.2	3.2	0.0
22	7 23	1 07	7 25a	0 57a	6.7	7.8	5.4	7.2	1.2	0.3	.....	1.2	3.4	3.4	0.0
23	7 51	1 35	7 53a	1 25a	7.0	8.2	5.7	7.5	1.2	0.3	.....	1.2	3.5	3.5	0.0
24	7 57	1 51	7 59a	1 41a	7.1	8.3	5.8	7.6	1.2	0.3	.....	1.2	3.6	3.6	0.0
25	8 10	2 06	8 12a	1 57a	7.3	8.5	5.9	7.8	1.2	0.3	.....	1.2	3.6	3.7	0.0
26	8 05	2 00	8 07a	1 50a	6.9	8.1	5.6	7.4	1.2	0.3	.....	1.2	3.4	3.5	0.0
27	7 15	1 10	7 17a	1 00a	6.8	8.0	5.5	7.3	1.2	0.3	.....	1.2	3.4	3.4	0.0
28	8 13	3 07	8 15a	2 57a	6.5	7:6	5.3	7.0	1.2	0.3	.....	1.2	3.2	3.3	East. 0.5
29	7 59	2 42	8 01a	2 32a	6.6	7.7	5.4	7.1	1.2	0.3	.....	1.2	3.3	3.3	0.5
30	7 18	1 27	7 20a	1 17a	6.9	8.1	5.6	7.4	1.2	0.3	.....	1.2	3.4	3.5	0.0
31	7 11	1 05	7 14a	1 16a	6.8	8.0	5.4	7.2	1.2	0.2	7 59	1.2	3.4	3.4	0.0
32	7 24	1 08	7 26a	0 58a	6.8	8.0	5.5	7.3	1.2	0.3	.....	1.2	3.4	3.4	0.5
33	7 19	1 29	7 21a	1 19a	6.6	7.7	5.4	7.1	1.2	0.3	.....	1.2	3.3	3.3	0.5
34	7 39	1 35	7 39a	1 24a	7.4	8.5	5.9	7.8	1.2	0.3	.....	1.2	3.7	3.7	0.5
35	7 30	1 28	7 28a	1 34a	7.3	8.6	5.8	7.7	0.7	0.2	6 39	0.7	3.6	3.7	0.5
36	7 30	1 24	7 32a	1 14a	7.2	8.4	5.8	7.7	1.2	0.3	.....	1.2	3.6	3.6	1.0
37	7 40	1 34	7 42a	1 24a	7.2	8.4	5.8	7.7	1.2	0.3	.....	1.2	3.6	3.6	1.0
38	7 40	1 44	7 42a	1 33a	6.4	7.5	5.2	6.9	1.1	0.3	.....	1.2	3.2	3.2	1.0
39	7 18	1 13	7 20a	1 07a	6.3	7.5	5.2	6.7	1.2	0.3	.....	1.2	3.1	3.1	1.0
40	7 30	1 27	7 33a	1 13a	6.4	7.5	5.3	6.7	1.1	0.2	.....	1.2	3.2	3.1	1.0
41	8 00	1 57	8 02a	1 47a	6.7	7.8	5.4	7.2	1.2	0.3	.....	1.2	3.4	3.4	1.0
42	7 51	1 40	7 53a	1 30a	6.8	8.0	5.5	7.3	1.2	0.3	.....	1.2	3.4	3.4	1.0
43	7 41	1 38	7 43a	1 28a	6.8	8.0	5.5	7.3	1.2	0.3	.....	1.2	3.4	3.4	1.0
44	7 46	1 34	7 48a	1 22a	5.9	7.0	4.8	6.4	1.2	0.2	8 25	1.2	3.0	3.0	1.0
45	8 00	1 42	8 02a	1 30a	6.0	7.0	4.9	6.4	1.2	0.3	8 46	1.2	3.0	3.0	1.0
46	7 41	1 32	7 43a	1 20a	5.4	6.3	4.4	5.8	1.1	0.2	.....	1.1	2.7	2.7	1.0
47	7 43	1 40	7 45a	1 28a	5.4	6.3	4.4	5.8	1.1	0.2	.....	1.1	2.7	2.7	1.0
48	7 36	1 33	7 38a	1 21a	4.6	5.4	3.7	4.9	1.0	0.2	.....	1.0	2.3	2.3	1.0
49	7 38	1 39	7 47a	1 28a	4.2	5.0	3.5	4.6	1.0	0.2	.....	1.0	2.1	2.2	1.0
50	8 02	1 57	8 04a	1 40a	3.0	3.5	2.4	3.3	0.9	0.1	.....	0.9	1.5	1.5	1.5
51	8 29	2 21	8 32a	2 02a	1.8	2.1	1.5	2.0	0.6	0.1	.....	0.6	0.9	0.9	1.5
52	8 36	2 29	8 40a	2 05a	1.4	1.6	1.1	1.6	0.6	0.1	.....	0.6	0.7	0.7	1.5
53	8 52	2 40	8 56a	2 22a	1.0	1.2	0.8	1.2	0.5	0.1	.....	0.5	0.5	0.5	1.5
54	10 20	3 55	10 24a	3 38a	0.7	0.9	0.6	0.9	0.4	0.1	.....	0.4	0.4	0.4	1.5
55	11 40	5 10	11 44a	4 55a	0.6	0.8	0.5	0.8	0.3	0.1	.....	0.3	0.4	0.4	1.5
56	0 40	6 25	0 44a	6 08a	0.8	1.0	0.7	1.1	0.4	0.1	.....	0.4	0.4	0.4	1.5
57	2 17	8 00	2 22a	7 42a	0.9	1.1	0.7	1.1	0.5	0.1	.....	0.5	0.4	0.4	1.5
58	8 12	2 00	8 14a	1 47a	4.5	5.3	3.6	4.8	1.0	0.2	.....	1.0	2.2	2.3	1.0
59	8 21	2 11	8 23a	1 57a	4.2	5.0	3.4	4.5	1.0	0.2	.....	1.0	2.1	2.1	1.0
60	7 35	1 45	7 38a	1 27a	2.5	3.0	2.0	2.7	0.7	0.1	.....	0.8	1.2	1.3	1.0
61	7 43	1 47	7 46a	1 29a	2.3	2.7	1.9	2.5	0.7	0.1	.....	0.7	1.2	1.2	1.0
62	8 00	1 52	8 03a	1 39a	5.0	5.9	4.0	5.4	1.1	0.2	.....	1.1	2.5	2.5	1.0
63	7 30	1 25	7 33a	1 05a	1.7	2.0	1.4	1.9	0.6	0.1	.....	0.6	0.8	0.9	1.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST)—Continued. FLORIDA—continued. *Eastern Coast*—Continued.	*North.*	*West.*				*Time meridian, 90° W.*		*Mean Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Jupiter Inlet Light	26 57	80 05	5 20	Key West	125	−1 27	−0 43	+0.3	0.0	1.25
2	Lake Worth Inlet	26 48	80 02	5 20	Key West	125	−1 24	−0 39	+0.4	0.0	1.33
3	Hillsboro Inlet	26 15	80 05	5 20	Key West	125	−1 07	−0 20	+0.5	0.0	1.42
4	Miami, Key Biscayne Bay	25 46	80 11	5 21	Key West	125	+0 04	+1 14	−0.1	0.0	0.92
	Florida Reefs.										
5	Cape Florida, Key Biscayne	25 40	80 09	5 21	Key West	125	−1 02	−0 13	+0.5	0.0	1.42
6	Fowey Rocks Light	25 35	80 06	5 20	Key West	125	−1 07	−0 27	+0.8	0.0	1.67
7	Point Elizabeth, Key Largo	25 14	80 19	5 21	Key West	125	−1 01	−0 24	+1.1	0.0	1.92
8	Carysport Reef Light	25 13	80 13	5 21	Key West	125	−1 05	−0 34	+0.9	0.0	1.75
9	Alligator Reef Light	24 51	80 37	5 22	Key West	125	−1 08	−0 41	+0.8	0.0	1.67
10	Indian Key	24 53	80 41	5 23	Key West	125	−1 01	−0 42	+0.6	0.0	1.50
11	Tom Harbor Keys	24 46	80 56	5 24	Key West	125	−1 11	−0 53	+0.4	0.0	1.33
12	Bamboo Key	24 45	81 00	5 24	Key West	125	+5 21	+6 23	0.0	0.0	1.08
13	Knights Key	24 42	81 07	5 24	Key West	125	−0 56	−0 31	+0.2	0.0	1.17
14	Sombrero Key Light	24 38	81 07	5 24	Key West	125	−0 59	−0 34	+0.3	0.0	1.25
15	Bahia Honda, south side	24 40	81 16	5 25	Key West	125	−1 06	−0 36	+0.3	0.0	1.25
16	American Shoal Light	24 31	81 31	5 26	Key West	125	−0 49	−0 24	+0.4	0.0	1.33
17	Sand Key Light	24 27	81 53	5 28	Key West	125	−0 39	−0 15	0.0	0.0	1.00
18	KEY WEST, Fort Taylor	24 33	81 49	5 27	Key West	125	0 00	0 00	0.0	0.0	1.00
19	Northwest Passage Light	24 37	81 54	5 28	Key West	125	+2 00	+2 30	+1.3	0.0	2.17
20	Marquesas Keys	24 33	82 07	5 28	Key West	125	−0 09	+0 21	0.0	0.0	1.00
21	Rebecca Shoal Light	24 35	82 35	5 30	Key West	125	+0 13	+0 39	−0.1	0.0	0.92
22	Tortugas Harbor Light	24 38	82 53	5 32	Key West	125	+0 29	+0 50	−0.1	0.0	0.92
23	Content Keys	24 48	81 30	5 26	Key West	125	+2 07	+3 00	+2.4	0.0	3.00
	Gulf of Mexico.										
24	Cape Sable, East Cape	25 07	81 05	5 24	Key West	125	+4 07	+4 47	+1.7	0.0	2.42
25	Loosmans River	25 32	81 12	5 25	Key West	125	+3 49	+4 30	+2.5	0.0	3.08
26	Pavilion Key	25 42	81 21	5 25	Key West	125	+3 39	+4 17	+2.3	0.0	2.92
27	Round Key	25 50	81 31	5 26	Key West	125	+3 29	+4 09	+2.2	0.0	2.83
28	Cape Romano	25 51	81 41	5 27	Key West	125	+3 20	+4 00	+1.4	0.0	2.17
29	Big Marco Pass	25 58	81 45	5 27	Key West	125	+3 10	+3 49	+1.1	0.0	1.92
30	Sanibel I. Light, San Carlos Entr	26 27	82 01	5 28	Key West	125	+2 58	+3 35	+0.6	0.0	1.50
31	Puntarasa, San Carlos Bay	26 29	82 00	5 28	Key West	125	+3 00	+3 37	+0.4	0.0	1.33
32	Boca Grande, Charlotte Harbor	26 43	82 16	5 29	Key West	125	+3 49	+3 45	+0.2	0.0	1.17
33	Punta Gorda, Charlotte Harbor	26 55	82 05	5 28	Key West	125	+5 06	+5 05	+0.2	0.0	1.17
34	Sarasota Point	27 17	82 34	5 30	Halifax	57	+4 01	+3 11	−3.2	−0.4	0.35
35	Egmont Key Light, Tampa Bay	27 36	82 46	5 31	Halifax	57	+3 19	+2 41	−3.4	−0.4	0.33
36	Palma Sola, Manatee R., Tampa B.	27 31	82 37	5 30	Halifax	57	+3 41	+2 58	−3.2	−0.4	0.37
37	St. Petersburg, Tampa Bay	27 46	82 38	5 31	Halifax	57	+4 15	+4 22	−2.8	−0.4	0.47
38	Tampa, Hillsboro Bay, Tampa Bay	27 57	82 27	5 30	Halifax	57	+5 31	+6 23	−2.6	−0.4	0.51
39	Dunedin, St. Josephs Sound	28 01	82 48	5 31	Halifax	57	+4 02	+3 54	−3.0	−0.4	0.42
40	Anclote Keys Light	28 10	82 51	5 31	Halifax	57	+3 07	+2 39	−2.8	−0.4	0.47
41	Bayport	28 32	82 39	5 31	Halifax	57	+4 46	+5 10	−2.4	−0.4	0.56
42	Cedar Keys	29 08	83 02	5 32	Halifax	57	+4 55	+4 48	−2.4	−0.4	0.56
43	Suwanee River Entrance	29 17	83 09	5 33	Halifax	57	+4 52	+4 22	−2.4	−0.4	0.53
44	Pepperfish Keys	29 30	83 22	5 33	Halifax	57	+4 25	+3 56	−2.7	−0.4	0.49
45	Steinhatchee River, Deadman Bay	29 40	83 24	5 34	Halifax	57	+5 15	+4 46	−2.8	−0.4	0.47
46	Point Edward	29 44	83 32	5 34	Halifax	57	+5 05	+4 03	−2.8	−0.4	0.44
47	Rock Island	29 58	83 50	5 35	Halifax	57	+4 44	+4 11	−2.4	−0.4	0.53
48	Aucilla River Entrance	30 05	84 00	5 36	Halifax	57	+5 17	+4 44	−2.4	−0.4	0.56
49	St. Marks Light, Apalachee Bay	30 04	84 11	5 37	Halifax	57	+5 47	+5 26	−2.3	−0.4	0.58
50	St. Marks, St. Marks River	30 09	84 12	5 37	Halifax	57	+6 18	+6 10	−2.8	−0.4	0.47
51	Ocklockonee Point	29 58	84 20	5 37	Halifax	57	+5 18	+4 35	−2.4	−0.4	0.53
52	Dog Island, St. George Sound	29 47	84 40	5 39	Galveston	129	+3 39	−0 59	+1.1	−0.3	1.92
53	Apalachicola, Apalachicola Bay	29 43	84 59	5 40	Galveston	129	+2 50	−1 15	+0.7	−0.3	1.67
54	St. Vincents Island, West Pass	29 38	85 06	5 40	Galveston	129	+2 11	−1 39	+0.6	−0.2	1.53
55	Cape San Blas	29 40	85 22	5 41	Galveston	129	+1 49	−1 50	+0.4	−0.2	1.40
56	St. Josephs, St. Josephs Bay	29 48	85 18	5 41	Galveston	129	+2 14	−1 51	+0.4	−0.2	1.47
57	St. Andrews, St. Andrews Bay	30 10	85 41	5 43	Galveston	129	+2 16	−1 38	+0.4	−0.2	1.33
58	East Pass, Choctawhatchee Bay	30 23	86 29	5 46	Galveston	129	+2 03	−1 17	+0.2	−0.2	1.27
59	Fort Pickens, Pensacola Bay	30 20	87 17	5 49	Galveston	129	+1 58	−1 52	0.0	−0.2	1.07
60	Warrington Navy Yd., Pensacola B.	30 21	87 16	5 49	Galveston	129	+2 03	−1 51	0.0	−0.2	1.13
61	Pensacola, Pensacola Bay	30 24	87 13	5 49	Galveston	129	+2 25	−1 53	+0.2	−0.2	1.20
62	Bohemia, Escambia B., Pensacola B	30 29	87 10	5 49	Galveston	129	+2 50	−1 08	0.0	−0.2	1.13

Number.	Interval				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	8 00	2 00	8 04a	1 37a	1.5	1.8	1.2	1.7	0.6	0.1	.....	0.6	0.8	0.8	1.5
2	8 08	2 04	8 06a	1 42a	1.6	1.9	1.3	1.8	0.6	0.1	.....	0.6	0.8	0.8	1.5
3	8 20	2 23	8 23a	2 08a	1.7	2.0	1.4	1.9	0.6	0.1	.....	0.6	0.8	0.9	1.5
4	9 30	3 56	9 34a	3 30a	1.1	1.3	0.9	1.3	0.5	0.1	.....	0.5	0.6	0.6	1.5
5	8 24	2 29	8 12b	3 10a	1.7	2.2	1.1	2.2	1.0	0.3	.....	1.1	0.8	1.0	1.5
6	8 20	2 16	8 09b	2 54a	2.0	2.6	1.3	2.6	1.1	0.4	.....	1.2	1.0	1.2	1.5
7	8 25	2 18	8 14b	2 54a	2.3	2.9	1.5	2.9	1.2	0.4	.....	1.3	1.2	1.3	2.0
8	8 21	2 08	8 10b	2 44a	2.1	2.7	1.4	2.7	1.1	0.4	.....	1.2	1.0	1.2	2.0
9	8 22	2 00	8 11b	2 38a	2.0	2.6	1.3	2.6	1.1	0.4	.....	1.2	1.0	1.2	2.0
10	8 23	1 56	8 11b	2 36a	1.8	2.3	1.2	2.4	1.1	0.3	.....	1.1	0.9	1.0	2.0
11	8 12	1 46	7 59b	2 29a	1.6	2.0	1.1	2.1	1.0	0.3	.....	1.1	0.8	0.9	2.0
12	2 19	8 56	2 04a	9 45b	1.3	1.7	0.9	1.8	0.9	0.3	.....	1.0	0.6	0.8	2.0
13	8 27	2 08	8 14b	2 53a	1.4	1.8	0.9	1.9	0.9	0.3	.....	1.0	0.7	0.8	2.0
14	8 24	2 05	8 11b	2 47a	1.5	1.9	1.0	2.0	1.0	0.3	.....	1.0	0.8	0.9	2.0
15	8 16	2 02	8 08b	2 44a	1.5	1.9	1.0	2.0	1.0	0.3	.....	1.0	0.8	0.9	2.5
16	8 32	2 13	8 19b	2 56a	1.6	2.0	1.1	2.1	1.0	0.3	.....	1.1	0.8	0.9	2.5
17	8 40	2 20	8 26b	3 07a	1.2	1.5	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	2.5
18	9 20	2 36	8 44b	3 22a	1.2	1.6	0.9	1.9	0.9	0.6	18 43	1.2	0.6	0.9	2.5
19	11 19	5 05	11 00b	5 33a	2.6	3.2	1.7	3.1	1.2	0.4	.....	1.3	1.2	1.4	2.5
20	9 10	2 56	8 56b	3 43a	1.2	1.5	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	2.5
21	9 30	3 12	8 37b	4 02a	1.1	1.4	0.7	2.1	1.0	1.0	.....	1.5	0.6	1.0	3.0
22	9 44	3 21	8 47b	4 14a	1.1	1.4	0.8	2.1	1.0	1.0	18 41	1.5	0.6	1.1	3.0
23	11 28	5 37	11 20b	6 05a	3.6	4.6	2.4	4.4	1.5	0.5	.....	1.6	1.8	2.0	2.5
24	1 05	7 26	0 56a	7 56a	2.9	3.7	1.9	3.6	1.3	0.4	.....	1.4	1.4	1.6	2.0
25	0 46	7 08	0 38a	7 34a	3.7	4.7	2.5	4.5	1.5	0.5	.....	1.6	1.8	2.0	2.0
26	0 36	6 55	0 27a	7 23a	3.5	4.5	2.3	4.3	1.5	0.5	.....	1.6	1.8	2.0	2.0
27	0 25	6 46	0 17a	7 14a	3.4	4.4	2.3	4.2	1.5	0.5	.....	1.5	1.7	1.9	2.0
28	0 15	6 36	0 06a	7 10a	2.6	3.3	1.7	3.3	1.3	0.4	.....	1.4	1.3	1.5	2.0
29	0 06	6 25	−0 06a	7 01a	2.3	2.9	1.5	2.9	1.2	0.4	.....	1.3	1.2	1.3	2.0
30	12 17	6 10	12 05b	6 48a	1.8	2.3	1.2	2.4	1.1	0.3	.....	1.1	0.9	1.0	2.5
31	12 19	6 12	12 06b	6 55a	1.6	2.0	1.1	2.1	1.0	0.3	.....	1.1	0.8	0.9	2.5
32	0 42	6 19	0 26a	7 11a	1.4	1.8	0.9	1.9	0.9	0.3	.....	1.0	0.7	0.8	2.5
33	2 00	7 40	1 47a	8 25a	1.4	1.8	0.9	1.9	0.9	0.3	.....	1.0	0.7	0.8	2.0
34	12 15	5 38	11 19b	6 08a	1.5	2.0	0.9	2.4	0.8	1.4	.....	1.6	0.8	1.3	2.5
35	11 32	5 07	10 33b	5 39a	1.4	1.8	0.9	2.3	0.8	1.3	.....	1.6	0.7	1.2	2.5
36	11 55	5 20	11 00b	5 50a	1.6	2.1	1.0	2.5	0.8	1.4	.....	1.7	0.8	1.4	2.5
37	0 03	6 48	11 39b	7 15a	2.0	2.6	1.2	3.0	0.9	1.6	.....	1.9	1.0	1.7	2.5
38	1 20	8 50	0 33a	9 15a	2.2	2.9	1.4	3.3	0.9	1.7	.....	2.0	1.1	1.8	2.0
39	12 15	6 20	11 22b	6 48a	1.8	2.4	1.1	2.8	0.9	1.5	.....	1.8	0.9	1.5	2.0
40	11 20	5 05	10 31b	5 32a	2.0	2.6	1.2	3.0	0.9	1.6	.....	1.9	1.0	1.7	2.0
41	0 34	7 36	−0 12a	8 01a	2.4	3.2	1.5	3.5	1.0	1.8	.....	2.1	1.2	1.9	2.0
42	0 42	7 13	−0 03a	7 37a	2.4	3.1	1.5	3.5	1.0	1.7	21 18	2.1	1.2	1.9	2.5
43	0 38	6 46	−0 09a	7 11a	2.3	3.0	1.4	3.4	1.0	1.7	.....	2.1	1.2	1.8	2.5
44	0 11	6 20	−0 38a	6 47a	2.1	2.8	1.3	3.1	0.9	1.6	.....	2.0	1.0	1.8	2.5
45	1 00	7 09	0 11a	7 36a	2.0	2.6	1.2	3.0	0.9	1.6	.....	1.9	1.0	1.7	2.5
46	0 50	6 26	−0 02a	6 54a	1.9	2.5	1.2	2.9	0.9	1.6	.....	1.9	1.0	1.6	2.5
47	0 28	6 33	−0 19a	6 58a	2.3	3.0	1.4	3.4	1.0	1.7	.....	2.1	1.2	1.8	2.5
48	1 00	7 05	0 14a	7 30a	2.4	3.2	1.5	3.5	1.0	1.8	.....	2.1	1.2	1.9	2.5
49	1 29	7 46	0 30a	8 03a	2.5	3.2	1.5	3.6	0.8	2.0	21 26	2.2	1.2	2.1	3.0
50	2 00	8 30	1 11a	8 57a	2.0	2.6	1.2	3.0	0.9	1.6	.....	1.9	1.0	1.7	3.0
51	1 00	7 05	0 13a	7 30a	2.3	3.0	1.4	3.4	1.0	1.7	.....	2.1	1.2	1.8	3.0
52	[0 20]	[6 25]	−1 10a	9 44a	[1.2]	[1.7]	[0.6]	2.9	.....	.....	.....	2.2	1.0	1.4	3.0
53	[12 10]	[5 35]	10 25b	9 27a	[0.8]	[1.1]	[0.4]	2.5	.....	.....	.....	2.1	0.8	1.2	3.5
54	[11 30]	[5 15]	9 46b	9 03a	[0.6]	[0.8]	[0.3]	2.3	.....	.....	.....	2.0	0.8	1.1	3.5
55	[11 10]	[4 55]	9 23b	8 51a	[0.4]	[0.6]	[0.2]	2.1	.....	.....	.....	1.9	0.7	1.0	3.5
56	[11 39]	[5 06]	9 48b	8 50a	[0.5]	[0.7]	[0.2]	2.2	.....	.....	.....	1.9	0.7	1.1	3.5
57	[11 35]	[5 05]	9 48b	9 01a	[0.3]	[0.4]	[0.1]	2.0	.....	.....	.....	1.8	0.7	1.0	3.5
58	[11 25]	[5 10]	9 32b	9 19a	[0.2]	[0.3]	[0.1]	1.9	.....	.....	.....	1.8	0.6	0.9	4.0
59	[11 23]	[4 19]	9 24b	8 41a	[0.1]	[0.1]	[0.0]	1.6	.....	.....	.....	1.6	0.5	0.8	4.5
60	[11 28]	[4 20]	9 29b	8 42a	[0.1]	[0.2]	[0.1]	1.7	.....	.....	21 33	1.7	0.5	0.8	4.5
61	[11 43]	[4 34]	9 51b	8 40a	[0.1]	[0.1]	[0.0]	1.8	.....	.....	.....	1.7	0.6	0.9	4.5
62	[12 15]	[5 08]	10 16b	9 25a	[0.1]	[0.1]	[0.0]	1.7	.....	.....	.....	1.7	0.5	0.8	4.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST)—Continued.										
	ALABAMA.	*North.*	*West.*				*Time meridian. 90° W.*		*Mean Low Water.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Perdido Entrance, Alabama Point	30 17	87 33	5 50	Galveston	129	+2 13	−1 31	+0.4	−0.2	1.33
2	Mobile Point Light, Mobile Bay	30 14	88 01	5 52	Galveston	129	+2 08	−1 54	−0.1	−0.1	1.00
3	Great Point Clear, Mobile Bay	30 29	87 56	5 52	Galveston	129	+4 12	−0 20	+0.8	−0.2	1.67
4	Mobile, Mobile River	30 41	88 02	5 52	Galveston	129	+4 50	+0 16	+0.4	−0.2	1.40
	MISSISSIPPI.										
5	Horn Island Light	30 13	88 32	5 54	Galveston	129	+2 52	−0 52	+0.4	−0.2	1.47
6	Pascagoula Light	30 21	88 34	5 54	Galveston	129	+1 31	−2 40	+0.5	−0.3	1.53
7	Biloxi Light	30 24	88 54	5 56	Galveston	129	+2 35	−2 18	+0.5	−0.3	1.53
8	Cat Island Light	30 14	89 09	5 57	Galveston	129	+3 06	−1 58	+0.4	−0.2	1.40
	LOUISIANA.										
9	Lake Borgne, The Rigolets	30 09	89 38	5 59	Galveston	129	+4 44	+2 42	−0.2	0.0	0.93
10	Chandeleur Light	30 03	88 52	5 55	Galveston	129	+1 58	−2 53	+0.2	−0.2	1.20
11	Pass a Loutre Light, Mississippi R.	29 12	89 02	5 56	Galveston	129	+1 06	−2 55	0.0	−0.2	1.07
12	Port Eads, South Pass, Miss. R	29 01	89 10	5 57	Galveston	129	+0 57	−3 21	0.0	−0.2	1.13
13	Southwest Pass Light, Miss. R	28 58	89 24	5 58	Galveston	129	+1 05	−3 28	+0.2	−0.2	1.27
14	Head of Passes Lt., Mississippi R	29 09	89 15	5 57	Galveston	129	+1 20	−3 13	−0.2	−0.2	0.93
15	Barataria Bay Light	29 17	89 57	6 00	Galveston	129	+1 21	−3 27	+0.4	−0.2	1.40
16	Grand Pass, Timbalier Light	29 03	90 21	6 01	Galveston	129	+1 20	−3 01	+0.2	−0.4	1.33
17	Wine Island, Terrebonne Bay	29 05	90 35	6 02	Galveston	129	+1 37	−2 45	0.0	−0.2	1.20
18	Isle Derniere, or Last Island	29 04	90 57	6 04	Galveston	129	+1 54	−2 23	+0.4	−0.4	1.47
19	Ship Shoal Light	28 55	91 04	6 04	Galveston	129	+1 49	−2 28	+0.4	−0.4	1.47
20	Southwest Reef Lt., Atchafalaya B.	29 24	91 30	6 06	Galveston	129	+0 52	−1 59	+0.4	−0.4	1.47
21	Atchafalaya River Entrance	29 28	91 16	6 05	Galveston	129	+1 01	−0 46	+0.1	−0.4	1.33
22	Cote Blanche, Cote Blanche Bay	29 44	91 43	6 07	Galveston	129	+1 13	+0 46	+0.1	−0.4	1.33
23	Weeks Island, Vermilion Bay	29 48	91 50	6 07	Galveston	129	+1 23	+2 30	+0.1	−0.2	1.20
24	Southwest Pass, Vermilion Bay	29 35	92 02	6 08	Galveston	129	−2 49	−1 49	+0.4	−0.4	1.53
25	Mermentau River Entrance	29 45	93 04	6 12	Key West	125	+5 52	+6 31	0.0	0.0	1.00
26	Calcasieu Light	29 47	93 21	6 13	Key West	125	+6 10	+6 53	+0.3	0.0	1.25
27	Sabine Pass Light	29 43	93 51	6 15	Key West	125	+7 12	+7 50	−0.5	0.0	0.58
	TEXAS.										
28	Bolivar Point Light	29 22	94 46	6 19	Galveston	129	+0 25	+0 12	+0.2	0.0	1.07
29	GALVESTON, Doswells Wharf	29 19	94 47	6 19	Galveston	129	0 00	0 00	0.0	0.0	1.00
30	Morgans Point, Galveston Bay	29 41	94 58	6 20	Galveston	129	+3 16	+2 24	−0.7	+0.1	0.47
31	Brazos River Entrance	28 56	95 18	6 21	Galveston	129	−0 07	+0 03	0.0	0.0	1.07
32	Pass Cavallo, Matagorda Bay	28 22	96 24	6 26	Galveston	129	+0 18	+0 25	0.0	0.0	1.07
33	Aransas Pass Light	27 52	97 03	6 28	Galveston	129	+0 10	+0 15	0.0	0.0	1.07
34	Corpus Christi Pass	27 36	97 13	6 29	Galveston	129	−0 09	−0 04	0.0	0.0	1.07
35	Brazos Santiago Light	26 04	97 10	6 29	Galveston	129	−1 38	−2 16	−0.4	0.0	0.73
36	Rio Grande Entrance	25 57	97 09	6 29	Galveston	129	−2 10	−2 18	−0.2	0.0	0.93
	MEXICO.										
	Gulf of Mexico.						*Local time.*				
37	Tampico	22 10	97 49	6 31	Galveston	129	−0 19	−2 30	−0.2	0.0	0.87
38	Vera Cruz	19 12	96 08	6 25	Galveston	129	+0 04	−2 25	+0.6	−0.4	1.60
39	Arcas Cays	20 15	91 58	6 08	Galveston	129	−3 04	−5 13	0.0	−0.2	1.07
40	Triangles	20 54	92 08	6 09	Galveston	129	−3 10	−5 18	0.0	−0.2	1.07
41	Laguna de Terminos	18 36	91 53	6 08	Galveston	129	−2 54	−5 08	0.0	−0.2	1.07
42	Campeche	19 50	90 32	6 02	Galveston	129	−2 16	−1 09	+1.2	−0.8	2.40
43	Sisal	21 10	90 03	6 00	Key West	125	+1 34	+2 08	+0.2	0.0	1.17
44	Cape Catoche	21 32	87 04	5 48	Key West	125	+0 32	+1 05	0.0	0.0	1.00
45	Mugeres Harbor	21 14	86 52	5 47	Key West	125	+0 21	+0 53	+0.1	0.0	1.06
46	Cozumel	20 28	86 48	5 47	Key West	125	−0 39	−0 07	0.0	0.0	1.00
	BELIZE.										
47	Belize	17 33	88 14	5 53	Key West	125	−0 46	−0 12	0.0	0.0	1.00
	GUATEMALA.										
	Caribbean Sea.										
48	Dulce River Entrance	15 50	88 45	5 55	Key West	125	+0 14	+0 48	+0.4	0.0	1.33
	HONDURAS.										
	Caribbean Sea.										
49	Roatan Island	16 23	86 28	5 46	Key West	125	−1 11	−0 89	+1.5	0.0	2.23
50	Bonacca Island	16 29	85 54	5 44	Key West	125	+0 04	+0 36	0.0	0.0	1.00

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*East.* °
1	[11 25]	[5 05]	9 38*b*	9 01*a*	[0.3]	[0.4]	[0.1]	2.0	.....	.....	.....	1.8	0.7	1.0	4.5
2	[11 19]	[3 15]	9 31*b*	8 36*a*	[0.2]	[0.2]	[0.1]	1.5	.....	.....	21 38	1.5	0.5	0.7	4.5
3	[0 50]	[6 30]	−0 50*a*	10 10*a*	[1.0]	[1.4]	[0.5]	2.5	.....	.....	.....	2.1	0.9	1.2	4.5
4	[1 35]	[6 50]	12 13*b*	10 46*a*	[0.5]	[0.7]	[0.2]	2.1	.....	.....	.....	1.9	0.7	1.0	4.5
5	[12 00]	[5 40]	10 13*b*	9 36*a*	[0.3]	[0.4]	[0.1]	2.0	.....	.....	.....	1.8	0.7	1.0	5.0
6	[0 20]	[5 45]	8 52*b*	7 48*a*	[0.4]	[0.6]	[0.1]	2.3	.....	.....	.....	2.2	0.7	1.1	5.0
7	[1 01]	[6 00]	9 54*b*	8 08*a*	[0.3]	[0.4]	[0.0]	2.3	.....	.....	21 29	2.2	0.7	1.1	5.0
8	[0 23]	[6 35]	10 24*b*	8 27*a*	[0.3]	[0.3]	[0.2]	2.1	.....	.....	21 52	2.0	0.7	1.0	5.0
9	[3 10]	[9 45]	12 00*b*	0 40*b*	[0.3]	[0.4]	[0.2]	1.4	.....	.....	.....	1.4	0.5	0.7	5.5
10	[11 53]	[5 33]	9 18*b*	7 34*a*	[0.2]	[0.3]	[0.1]	1.8	.....	.....	.....	1.9	0.6	0.9	5.0
11	[11 15]	[5 00]	8 25*b*	7 31*a*	[0.1]	[0.1]	[0.0]	1.6	.....	.....	.....	1.7	0.5	0.8	5.0
12	[10 55]	[4 42]	8 15*b*	7 04*a*	[0.1]	[0.2]	[0.1]	1.7	.....	.....	20 07	1.7	0.5	0.8	5.0
13	[10 54]	[4 41]	8 22*b*	6 56*a*	[0.2]	[0.3]	[0.1]	1.9	.....	.....	.....	1.8	0.6	0.9	5.0
14	[11 30]	[4 30]	8 38*b*	7 12*a*	[0.1]	[0.1]	[0.0]	1.4	.....	.....	.....	1.6	0.4	0.7	5.0
15	[11 00]	[4 47]	8 36*b*	6 55*a*	[0.4]	[0.5]	[0.2]	2.1	.....	.....	.....	1.9	0.7	1.0	5.5
16	[10 50]	[5 38]	8 40*b*	7 20*a*	[0.4]	[0.5]	[0.3]	2.0	.....	.....	.....	1.6	0.5	0.8	5.5
17	[11 00]	[6 00]	8 50*b*	7 35*a*	[0.3]	[0.3]	[0.3]	1.8	.....	.....	.....	1.5	0.5	0.7	5.5
18	[11 15]	[6 30]	9 05*b*	7 55*a*	[0.7]	[0.8]	[0.6]	2.2	.....	.....	.....	1.7	0.6	0.8	6.0
19	[11 10]	[6 33]	9 00*b*	7 50*a*	[0.6]	[0.7]	[0.5]	2.2	.....	.....	.....	1.7	0.6	0.8	6.0
20	[12 00]	[6 56]	8 00*b*	8 16*a*	[0.6]	[0.7]	[0.5]	2.2	.....	.....	.....	1.7	0.6	0.8	6.0
21	[2 00]	[8 25]	8 10*b*	9 30*a*	[0.6]	[0.7]	[0.5]	2.0	.....	.....	.....	1.6	0.5	0.7	6.0
22	[3 20]	[9 55]	8 20*b*	11 00*a*	[0.6]	[0.7]	[0.5]	2.0	.....	.....	.....	1.6	0.5	0.7	6.0
23	[6 16]	[0 13]	8 30*b*	0 19*b*	[0.7]	[0.8]	[0.6]	1.8	.....	.....	0 28	1.5	0.5	0.7	6.0
24	[2 10]	[8 27]	4 17*b*	8 24*a*	[1.0]	[1.1]	[0.9]	2.3	.....	.....	.....	1.7	0.6	0.8	6.5
25	2 00	8 20	3 25*b*	8 00*a*	1.2	1.4	1.0	2.2	0.4	1.2	.....	1.3	0.6	1.0	7.0
26	2 17	8 41	3 34*b*	8 22*a*	1.5	1.7	1.3	2.0	0.4	1.2	.....	1.2	0.8	0.9	7.0
27	3 17	9 36	4 42*b*	9 17*a*	0.7	0.9	0.6	1.2	0.3	0.6	.....	0.7	0.4	0.5	7.0
28	[4 07]	[10 23]	7 20*b*	10 14*a*	[0.7]	[0.8]	[0.6]	1.6	.....	.....	.....	1.4	0.7	0.9	7.5
29	[4 18]	[10 33]	6 55*b*	10 02*a*	[0.5]	[0.5]	[0.4]	1.5	.....	.....	21 38	1.4	0.6	0.9	7.5
30	[6 30]	[0 40]	10 10*b*	0 00*b*	[0.1]	[0.1]	[0.1]	0.7	.....	.....	.....	0.9	0.3	0.5	7.5
31	[4 15]	[10 30]	6 46*b*	10 03*a*	[0.7]	[0.8]	[0.6]	1.6	.....	.....	.....	1.4	0.6	0.8	7.5
32	[4 35]	[10 47]	7 06*b*	10 20*a*	[0.7]	[0.8]	[0.6]	1.6	.....	.....	.....	1.4	0.6	0.8	8.0
33	[4 25]	[10 35]	6 56*b*	10 08*a*	[0.8]	[0.9]	[0.7]	1.6	.....	.....	.....	1.4	0.6	0.8	8.0
34	[4 05]	[10 15]	6 36*b*	9 48*a*	[0.7]	[0.8]	[0.6]	1.6	.....	.....	.....	1.4	0.6	0.8	8.0
35	[2 00]	[8 10]	5 07*b*	7 36*a*	[0.3]	[0.4]	[0.2]	1.1	.....	.....	.....	1.2	0.4	0.6	8.0
36	[1 55]	[8 03]	4 35*b*	7 34*a*	[0.4]	[0.5]	[0.5]	1.4	.....	.....	.....	1.3	0.5	0.7	8.0
37	[2 00]	[8 34]	6 55*b*	7 51*a*	[0.2]	[0.2]	[0.1]	1.3	.....	.....	19 57	1.3	0.5	0.7	8.0
38	[2 49]	[8 38]	7 18*b*	7 56*a*	[0.4]	[0.6]	[0.3]	2.4	.....	.....	20 35	2.4	0.7	1.1	6.5
39	[12 06]	[5 50]	4 10*b*	5 08*a*	[0.3]	[0.4]	[0.2]	1.6	.....	.....	.....	1.5	0.5	0.8	6.0
40	[12 00]	[5 45]	4 04*b*	5 03*a*	[0.3]	[0.4]	[0.2]	1.6	.....	.....	.....	1.5	0.5	0.8	6.0
41	[12 16]	[6 00]	4 20*b*	5 18*a*	[0.3]	[0.4]	[0.2]	1.6	.....	.....	.....	1.5	0.5	0.8	5.5
42	2 59	9 28	4 59*b*	9 13*a*	1.7	2.1	1.3	3.6	0.4	3.0	20 59	3.0	0.8	2.3	5.5
43	10 20	4 10	10 07*b*	4 55*a*	1.4	1.8	0.9	1.9	0.9	0.3	.....	1.0	0.7	0.8	5.5
44	9 30	3 19	9 16*b*	4 06*a*	1.2	1.5	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	4.5
45	9 20	3 08	9 05*b*	3 57*a*	1.3	1.6	0.9	1.8	0.9	0.3	.....	1.0	0.6	0.8	4.5
46	8 20	2 08	8 06*b*	2 55*a*	1.2	1.5	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	4.5
47	8 00	1 50	7 46*b*	2 37*a*	1.2	1.5	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	5.5
48	9 00	2 50	8 47*b*	3 33*a*	1.6	2.0	1.1	2.1	1.0	0.3	.....	1.1	0.8	0.9	5.5
49	7 35	1 23	7 25*b*	1 56*a*	2.7	3.5	1.8	3.4	1.3	0.4	.....	1.4	1.4	1.5	6.0
50	8 50	2 38	8 36*b*	3 25*a*	1.2	1.5	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	5.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (EAST COAST)—Continued.										
	NICARAGUA.										
	Caribbean Sea.	*North.*	*West.*				*Local time.*		*Mean Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Serranilla Bank	15 50	79 48	5 19	Key West	125	−4 47	−4 25	+0.4	0.0	1.33
2	Serrana Bank	14 20	80 17	5 21	Key West	125	−4 47	−4 25	+0.4	0.0	1.33
3	Old Providence Island	13 21	81 18	5 25	Key West	125	−4 47	−4 25	−0.4	0.0	0.67
4	Cape Gracias a Dios Harbor	14 52	83 14	5 33	Key West	125	+1 33	+2 04	+0.4	0.0	1.33
5	Pearl Cays	12 28	83 26	5 34	Key West	125	+5 28	+6 00	+0.4	0.0	1.33
6	Corn Islands	12 10	83 03	5 32	Key West	125	+5 13	+5 44	+0.4	0.0	1.33
7	Bluefields, Lagoon Entrance	12 01	83 42	5 35	Key West	125	+4 38	+4 57	−0.5	0.0	0.58
8	San Juan del Norte (Greytown)	10 55	83 41	5 35	Key West	125	+4 38	+5 10	0.0	0.0	1.00
	COSTA RICA.										
	Caribbean Sea.										
9	Point Blanco	10 00	83 02	5 32	Key West	125	+4 38	+5 10	0.0	0.0	1.08
	BERMUDA ISLANDS.										
10	Ireland Island, dockyard	32 20	64 50	4 19	Sandy Hook	89	−0 28	−0 32	−1.3	0.0	0.70
	BAHAMAS.										
11	Memory Rock	26 59	79 09	5 17	Key West	125	−1 07	−0 35	+1.2	0.0	2.08
12	Great Bahama Island	26 29	78 40	5 15	Key West	125	−1 02	−0 30	+1.8	0.0	2.50
13	Whale Key	26 42	77 06	5 09	Key West	125	−0 58	−0 26	+2.4	0.0	2.92
14	Great Abaco	26 17	77 08	5 09	Key West	125	−0 56	−0 24	+1.2	0.0	2.00
15	Gun Key	25 34	79 18	5 17	Key West	125	−0 27	+0 05	+1.2	0.0	1.92
16	Andros Island	24 29	77 44	5 11	Key West	125	−1 08	−0 36	+1.1	0.0	1.92
17	Nassau, New Providence Island	25 05	77 21	5 09	Key West	125	−1 25	−0 52	+1.4	0.0	2.17
18	Eleuthera Island	25 08	76 08	5 05	Key West	125	−1 48	−1 15	+1.9	0.0	2.58
19	Cat Island	24 20	75 24	5 02	Key West	125	−1 48	−1 16	+1.9	0.0	2.58
20	San Salvador, or Watling Island	24 06	74 26	4 58	Key West	125	−1 48	−1 16	+1.9	0.0	2.58
21	Clarence Harbor, Long Island	23 06	74 58	5 00	Key West	125	−0 28	+0 04	+2.0	0.0	2.67
22	Crooked Island	22 49	74 21	4 57	Key West	125	−1 58	−1 26	+0.8	0.0	1.67
23	Mariguana Island	22 26	73 00	4 52	Key West	125	−1 28	−0 56	+1.1	0.0	1.92
24	Inagua Island	20 56	73 41	4 55	Key West	125	−0 58	−0 26	+1.5	0.0	2.25
25	Turks Islands	21 26	71 09	4 45	Key West	125	−1 18	−0 46	+1.1	0.0	1.92
	WEST INDIES.										
	Cuba.						*Time meridian, 75° W.*				
26	Cape San Antonio	21 52	84 58	5 40	Key West	125	+ 0 23	+ 0 55	0.0	0.0	1.00
27	Bahia Honda	22 58	83 13	5 33	Key West	125	+ 0 10	+ 0 36	−0.2	0.0	0.83
28	Habana	23 08	82 22	5 29	Key West	125	0 00	+ 0 22	−0.3	0.0	0.75
29	Matanzas	23 02	81 45	5 27	Key West	125	+ 0 10	+ 0 42	+0.5	0.0	1.42
30	Cardenas	23 04	81 12	5 25	Key West	125	+ 1 03	+ 1 35	+0.2	0.0	1.17
31	Cayo Paredón Grande	22 29	78 09	5 13	Key West	125	− 1 14	− 0 42	+1.0	0.0	1.83
32	Nuevitas Bay Entrance	21 38	77 07	5 08	Key West	125	+12 15	+12 44	+0.1	0.0	1.08
33	Nuevitas, Nuevitas Bay	21 35	77 15	5 09	Key West	125	+14 01	+14 38	+0.2	0.0	1.17
34	Port Padre	21 12	76 36	5 06	Key West	125	+12 24	+12 55	+0.9	0.0	1.75
35	Port Gibara	21 06	76 08	5 05	Key West	125	+11 30	+11 57	+0.7	0.0	1.56
36	Port Nipe Entrance	20 48	75 35	5 02	Key West	125	+11 34	+12 04	+0.8	0.0	1.67
37	Livisa Bay Entrance	20 45	75 28	5 02	Key West	125	+11 27	+11 59	+0.7	0.0	1.58
38	Port Tanama	20 43	75 19	5 01	Key West	125	+11 29	+11 57	+0.7	0.0	1.58
39	Cape Maisi	20 15	74 08	4 57	Key West	125	+11 14	+11 46	+1.0	0.0	1.83
40	Guantanamo Bay Entrance	19 55	75 09	5 01	Key West	125	+12 25	+12 54	−0.2	0.0	0.83
41	Santiago Bay Entrance	20 00	75 50	5 03	Key West	125	+12 49	+13 17	−0.1	0.0	0.92
42	Ensenada de Mora	19 51	77 30	5 10	Key West	125	+12 46	+13 23	−0.4	0.0	0.67
43	Manzanillo	20 19	77 10	5 09	Key West	125	−10 04	− 9 32	+1.9	0.0	2.58
44	Port Xagua Entrance (Cienfuegos)	22 08	80 28	5 22	Key West	125	+ 0 39	+ 1 09	+0.4	0.0	0.67
	Jamaica.						*Local time.*				
45	Morant Point	17 55	76 11	5 05	Galveston	129	− 9 41	+12 02	−0.4	0.0	0.74
46	Port Royal	17 56	76 47	5 07	Galveston	129	− 8 41	−11 48	−0.4	0.0	0.74
47	South Negril Point	18 18	78 24	5 14	Galveston	129	− 5 16	− 8 23	−0.4	0.0	0.74
48	St. Anns Bay	18 30	77 16	5 09	Galveston	129	− 8 41	−11 48	−0.4	0.0	0.81
49	Grand Cayman Island	19 20	81 21	5 25	Galveston	129	−10 41	+11 02	−0.3	−0.1	0.87
	Haiti or Santo Domingo.										
50	Port au Prince	18 37	72 21	4 49	Key West	125	+12 00	+ 0 04	0.0	0.0	1.00
51	Fort Dauphin	19 45	71 48	4 47	St. Johns	53	+ 0 04	+ 0 03	+1.4	−0.4	1.92
52	Samana Bay	19 13	69 09	4 37	St. Johns	53	+ 2 14	+ 2 12	−0.6	−0.4	0.92
53	Saona Island	18 10	68 40	4 35	Galveston	129	− 8 58	− 8 48	−0.8	0.0	0.40
54	Santo Domingo	18 27	69 53	4 40	Galveston	129	−10 42	− 9 24	+0.6	−0.2	1.48
55	Jacmel	18 12	72 35	4 50	Galveston	129	−10 42	− 9 24	+0.8	−0.2	1.68

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	4 00	10 13	3 47b	10 56b	1.6	2.0	1.1	2.1	1.0	0.3	.....	1.1	0.8	0.9	3.5
2	4 00	10 13	3 47b	10 56b	1.6	2.0	1.1	2.1	1.0	0.3	.....	1.1	0.8	0.9	3.5
3	4 00	10 13	3 43b	11 08b	0.8	1.0	0.5	1.2	0.7	0.2	.....	0.7	0.4	0.5	4.0
4	10 20	4 07	10 07a	4 50b	1.6	2.0	1.1	2.1	1.0	0.3	.....	1.1	0.8	0.9	4.5
5	1 50	8 08	1 37b	8 46b	1.6	2.0	1.1	2.1	1.0	0.3	.....	1.1	0.8	0.9	4.5
6	1 35	7 47	1 22b	8 30b	1.6	2.0	1.1	2.1	1.0	0.3	.....	1.1	0.8	0.9	4.5
7	1 04	7 00	0 19a	7 51b	0.7	0.8	0.6	1.3	0.9	0.3	.....	0.9	0.3	0.6	5.0
8	1 00	7 13	0 46b	8 00b	1.2	1.5	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	5.0
9	1 00	7 13	0 45b	8 02b	1.3	1.6	0.9	1.8	0.9	0.3	.....	1.0	0.6	0.8	5.0
															West.
10	7 04	0 52	7 01a	1 08a	3.3	4.0	2.6	3.6	0.8	0.1	.....	0.9	1.6	1.7	9.5
11	7 40	1 28	7 30a	2 01a	2.5	3.2	1.7	3.1	1.2	0.4	.....	1.3	1.2	1.4	0.5 E.
12	7 45	1 33	7 35a	2 03a	3.0	3.8	2.0	3.8	1.4	0.5	.....	1.5	1.5	1.7	0.5 E.
13	7 50	1 38	7 41a	2 05a	3.5	4.5	2.4	4.3	1.5	0.5	.....	1.6	1.8	1.9	0.5 W.
14	7 52	1 40	7 42a	2 14a	2.4	3.1	1.6	3.0	1.2	0.4	.....	1.3	1.2	1.4	0.0
15	8 20	2 08	8 09a	2 44a	2.3	3.0	1.5	2.9	1.2	0.4	.....	1.3	1.2	1.3	1.0 E.
16	7 40	1 28	7 29a	2 04a	2.3	3.0	1.5	2.9	1.2	0.4	.....	1.3	1.2	1.3	0.5 E.
17	7 23	1 12	7 28a	0 46a	2.6	3.1	2.1	3.1	1.0	0.3	8 22	1.0	1.3	1.4	0.0
18	7 00	0 48	6 51a	1 18a	3.1	4.0	2.1	3.9	1.4	0.5	.....	1.5	1.6	1.7	0.0
19	7 00	0 48	6 51a	1 18a	3.1	4.0	2.1	3.9	1.4	0.5	.....	1.5	1.6	1.7	0.0
20	7 00	0 48	6 51a	1 18a	3.1	4.0	2.1	3.9	1.4	0.5	.....	1.5	1.6	1.7	0.5 W.
21	8 20	2 08	8 11a	2 38a	3.2	4.1	2.1	4.0	1.4	0.5	.....	1.5	1.6	1.8	0.0
22	6 50	0 38	6 39a	1 16a	2.0	2.5	1.3	2.6	1.1	0.4	.....	1.2	1.0	1.2	0.0
23	7 20	1 08	7 09a	1 44a	2.3	3.0	1.5	2.9	1.2	0.4	.....	1.3	1.2	1.3	0.5 W.
24	7 50	1 38	7 40a	2 11a	2.7	3.5	1.8	3.4	1.3	0.4	.....	1.4	1.4	1.5	0.0
25	7 30	1 18	7 19a	1 54a	2.3	3.0	1.5	2.9	1.2	0.4	.....	1.3	1.2	1.3	1.0 W.
															East.
26	8 30	2 18	7 53b	2 10a	1.2	1.5	0.9	1.4	0.9	0.1	.....	0.9	0.6	0.7	3.5
27	8 24	2 06	8 15b	3 28a	1.0	1.4	0.8	1.9	1.3	0.2	.....	1.3	0.5	1.0	3.0
28	8 18	1 56	8 09b	3 18a	0.9	1.3	0.7	1.7	1.2	0.2	.....	1.2	0.5	0.9	3.0
29	8 30	2 18	8 00b	2 12a	1.7	2.2	1.2	2.9	1.1	0.1	.....	1.1	0.8	0.9	2.5
30	9 25	3 13	8 52b	3 06a	1.4	1.8	1.0	1.5	1.0	0.1	.....	1.0	0.7	0.8	2.0
31	7 20	1 08	6 55b	1 02a	2.2	2.8	1.6	2.4	1.2	0.1	.....	1.2	1.1	1.2	1.0
32	8 30	2 15	9 05a	2 00a	1.3	1.5	1.0	1.8	0.6	0.4	.....	0.8	0.7	0.8	1.0
33	10 15	4 08	10 52a	3 55a	1.4	1.6	1.1	1.9	0.6	0.4	.....	0.8	0.7	0.9	1.0
34	8 41	2 28	9 06a	2 12a	2.1	2.4	1.8	2.9	1.1	0.5	.....	1.2	1.1	1.3	1.5
35	7 48	1 31	8 08a	1 16a	1.9	2.2	1.4	2.6	0.9	0.5	.....	1.1	1.0	1.1	1.0
36	7 55	1 41	8 08a	1 28a	2.0	2.3	1.5	2.7	0.9	0.5	.....	1.1	1.0	1.1	1.0
37	7 48	1 36	8 00a	1 24a	1.9	2.2	1.4	2.6	0.9	0.5	.....	1.1	0.9	1.1	1.0
38	7 51	1 35	8 05a	1 23a	1.9	2.2	1.4	2.6	0.9	0.5	.....	1.1	1.0	1.1	1.0
39	7 40	1 28	8 06a	1 04a	2.2	2.8	1.6	2.4	1.2	0.1	.....	1.2	1.1	1.2	0.5
40	8 47	2 32	9 25a	1 56a	1.0	1.3	0.6	1.4	0.6	0.3	.....	0.6	0.5	0.6	1.0
41	9 09	2 53	9 52a	2 48a	1.1	1.4	0.7	1.5	0.5	0.3	.....	0.6	0.5	0.7	1.0
42	8 59	2 52	10 02a	3 18a	0.8	1.0	0.6	1.1	0.2	0.4	.....	0.4	0.4	0.6	1.5
43	11 00	4 48	12 00a	5 10a	3.1	4.0	2.1	3.9	1.4	0.5	.....	1.5	1.6	1.7	1.5
44	9 04	2 50	10 00b	3 17a	0.8	1.0	0.6	1.1	0.2	0.4	.....	0.4	0.4	0.6	2.0
45	.....	.....	10 00a	10 00b	[0.4]	.....	.....	1.1	.....	.....	.....	1.0	0.4	0.6	1.5
46	.....	.....	11 00a	11 00b	[0.4]	.....	.....	1.1	.....	.....	.....	1.0	0.4	0.6	2.0
47	.....	.....	2 00b	2 00a	[0.4]	.....	.....	1.1	.....	.....	.....	1.0	0.4	0.6	2.0
48	.....	.....	11 00a	11 00b	[0.5]	.....	.....	1.2	.....	.....	.....	1.1	0.4	0.6	2.0
49	.....	.....	9 00a	9 00b	[0.5]	.....	.....	1.3	.....	.....	.....	1.1	0.4	0.6	3.0
50	8 23	2 08	8 12a	1 18a	1.2	1.5	0.9	1.6	0.7	0.1	.....	1.1	0.6	0.7	0.0
51	6 50	0 39	7 00a	11 00b	4.3	5.5	2.9	5.5	1.6	0.5	.....	1.8	2.2	2.3	0.0
52	9 00	2 48	8 00a	0 00a	2.3	3.0	1.5	3.1	1.2	0.4	.....	1.3	1.2	1.3	0.5 W.
53	[6 56]	[1 22]	10 44a	1 36a	[0.2]	.....	.....	0.6	.....	.....	.....	0.6	0.2	0.3	0.5 W.
54	.....	.....	9 00a	1 00a	[0.9]	.....	.....	2.2	.....	.....	.....	1.4	0.8	1.1	0.5 W.
55	.....	.....	9 00a	1 00a	[1.0]	.....	.....	2.5	.....	.....	.....	1.5	0.9	1.2	0.5 E.

Number.	Station.	Geographic position. Latitude.	Longitude. Arc.	Longitude. Time.	Standard port for reference. Name.	Page.	Tidal differences. Time. HW.	Time. LW.	Height. HW.	Height. LW.	Ratio of ranges.
	NORTH AMERICA (EAST COAST)—Continued.										
	WEST INDIES—continued.						*Time meridian, 60° W.*		*Mean Low Water.*		
	Porto Rico.	*North.* ° ′	*West.* ° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Culebrita Island Light	18 19	65 14	4 21	Galveston	129	−10 32	− 9 09	− 0.4	−0.2	0.67
2	Great Harbor, Culebra Island	18 18	65 17	4 21	Key West	125	+12 01	+ 0 30	− 0.6	0.0	0.58
3	Port Mulas, Vieques or Crab Island	18 09	65 27	4 22	Key West	125	+12 09	+ 0 11	− 0.4	0.0	0.67
4	Port Ferro, Vieques or Crab Island	18 06	65 26	4 22	Galveston	129	− 9 21	−10 58	− 0.5	0.0	0.67
5	San Juan	18 29	66 07	4 24	Key West	125	− 0 02	+ 0 34	− 0.1	0.0	0.92
6	Fajardo Harbor	18 20	65 38	4 23	Key West	125	− 0 31	+ 0 27	− 0.1	0.0	0.92
7	Point Tuna Light	17 59	65 53	4 24	Galveston	129	− 7 57	− 9 46	− 0.5	0.0	0.67
8	Port of Ponce	17 59	66 40	4 27	Galveston	129	− 7 32	− 9 18	− 0.6	0.0	0.60
9	Port Guanica	17 58	66 56	4 28	Galveston	129	− 7 30	− 9 22	− 0.5	0.0	0.67
10	Parguera	17 58	67 03	4 28	Galveston	129	− 7 30	− 9 22	− 0.5	0.0	0.67
11	Port Real	18 06	67 11	4 29	Key West	125	− 0 23	+ 0 19	− 0.4	0.0	0.67
12	Mayaguez	18 13	67 08	4 29	Key West	125	− 0 20	+ 0 24	− 0.1	0.0	0.92
	Lesser Antilles or Caribbees.						*Local time.*				
13	St. Thomas Island	18 25	64 58	4 20	Galveston	129	−10 54	− 9 34	− 0.4	0.0	0.80
14	St. Bartholomew Island	17 54	62 51	4 11	Galveston	129	−10 43	− 9 25	0.0	0.0	1.00
15	Antigua Island	16 59	61 48	4 07	Galveston	129	− 9 43	− 8 25	+ 0.4	−0.2	1.34
16	Guadaloupe	16 12	61 27	4 06	Galveston	129	− 8 43	− 7 25	− 0.3	−0.1	0.87
17	Dominica	15 35	61 31	4 06	Key West	125	+ 7 35	+ 8 06	0.0	0.0	1.00
18	Martinique	14 42	60 54	4 04	Key West	125	+ 7 25	+ 7 56	− 0.3	0.0	0.75
19	St. Vincent, Kingstown	13 10	61 13	4 05	Key West	125	+ 6 18	+ 6 52	0.0	0.0	1.00
20	Barbados	13 07	59 36	3 58	Key West	125	+ 6 25	+ 6 56	+ 1.1	0.0	1.92
21	Grenada	12 04	61 45	4 07	Key West	125	+ 6 05	+ 6 36	0.0	0.0	1.00
22	Tobago	11 10	60 42	4 03	Key West	125	+ 7 25	+ 7 56	+ 0.4	0.0	1.33
	SOUTH AMERICA (NORTH AND EAST COAST).										
	PANAMA AND CANAL ZONE.						*Time meridian, 75° W.*				
	Caribbean Sea.										
23	Boca del Toro, Almirante Bay	9 21	82 15	5 29	Key West	125	− 7 27	− 7 36	− 0.4	0.0	0.67
24	Colon (Aspinwall)	9 18	79 51	5 19	Key West	125	− 8 22	− 7 51	− 0.3	0.0	0.75
25	Caledonia Harbor	8 56	77 47	5 11	Key West	125	− 9 32	− 9 01	0.0	0.0	1.00
	COLOMBIA.						*Local time.*		*Mean Low Water Springs.*		
	Caribbean Sea.										
26	Cartagena	10 27	75 32	5 02	Key West	125	−10 28	− 9 52	+ 0.2	+0.2	1.08
	VENEZUELA.										
27	Maracaibo	10 43	71 39	4 47	Apia	221	− 1 38	− 1 32	− 0.7	−0.1	0.79
28	La Guaira	10 40	66 58	4 28	Apia	221	− 0 39	− 0 38	− 0.3	−0.1	0.91
29	Parlamar, Margarita Island	10 58	63 51	4 15	Apia	221	− 2 19	− 2 16	− 1.5	−0.1	0.50
30	Orinoco R. Entr., Cangrejo Island	8 39	60 35	4 02	Apia	221	− 1 50	− 1 14	+ 3.0	+0.2	2.08
	TRINIDAD.										
31	Port of Spain	10 39	61 31	4 06	Apia	221	− 2 20	− 2 21	+ 0.7	+0.1	1.26
32	Galcota Point	10 08	60 59	4 04	Apia	221	− 2 40	− 2 41	0.0	0.0	1.00
	GUIANA.										
33	Georgetown, Demerara River	6 49	58 11	3 53	Kingstown	321	+ 5 58	+ 5 30	− 2.3	+0.1	0.73
34	Paramaribo, Surinam River	6 02	55 13	3 41	Kingstown	321	+ 7 30	+ 7 40	− 1.4	+0.2	0.81
35	Cayenne, Cayenne River	4 56	52 20	3 29	Kingstown	321	+ 6 06	+ 6 09	− 4.6	−0.2	0.51
	BRAZIL.										
36	Cape Cachipour	3 49	51 01	3 24	Cape Town	273	+ 4 17	+ 4 14	+ 4.4	+0.6	2.12
37	Conani River	2 50	50 53	3 24	Cape Town	273	+ 5 08	+ 7 19	+12.7	+1.6	4.26
38	Maraca Island Anchorage	2 09	50 30	3 22	Cape Town	273	+ 4 35	+ 7 49	+22.5	+3.0	6.74
39	Balique Id. Lt., Amazon R. Entr	0 54	49 55	3 20	Cape Town	273	+ 7 06	+10 19	+ 8.7	+1.2	3.21
40	Point Pedrera, Amazon River	0 11	50 43	3 23	Cape Town	273	+ 9 25	+12 39	+10.3	+1.4	3.62
		South.									
41	Dentro Channel, Para R. Entr	0 23	47 55	3 12	Cape Town	273	+ 9 15	+ 9 17	+ 5.1	+0.6	2.32
42	Para, Para River	1 27	48 31	3 14	Cape Town	273	+10 25	+11 14	+ 4.9	+0.2	2.38
43	San Joao Islands Light	1 17	44 55	3 00	Cape Town	273	+ 4 48	+ 4 50	+ 8.3	+1.0	3.15
44	Maranhão, or San Luiz	2 30	44 19	2 57	Cape Town	273	+ 5 24	+ 5 26	+10.5	+1.3	3.71
45	Santa Anna Reefs Light	2 16	43 36	2 54	Cape Town	273	+ 4 09	+ 4 10	+ 7.6	+1.0	2.94
46	Tutoia Anchorage	2 46	42 21	2 49	Cape Town	273	+ 3 39	+ 3 40	+ 7.3	+1.0	2.85
47	San Joao da Paranahiba	2 59	41 47	2 47	Cape Town	273	+ 3 52	+ 3 53	+ 7.3	+0.9	2.88
48	Camocim	2 53	40 52	2 43	Cape Town	273	+ 4 41	+ 4 42	+ 4.6	+0.4	2.24
49	Point Jericoacoara	2 48	40 32	2 42	Cape Town	273	+ 3 49	+ 3 50	+ 3.0	+0.4	1.76
50	Mandahi River Entrance	3 10	39 23	2 38	Cape Town	273	+ 3 54	+ 3 55	+ 3.6	+0.4	1.94
51	Ceara	3 42	38 31	2 34	Cape Town	273	+ 3 59	+ 3 24	+ 3.2	+0.2	1.88
52	Aracati, Jaguarybe River	4 28	37 45	2 31	Cape Town	273	+ 4 24	+ 4 23	+ 3.1	+0.4	1.79
53	Povoaçao, Mossoro River	4 57	37 10	2 29	Cape Town	273	+ 3 18	+ 3 19	+ 3.5	+0.4	1.91
54	Cape St. Roque	5 29	35 16	2 21	Cape Town	273	+ 2 38	+ 2 39	+ 3.7	+0.4	1.97
55	Parahiba River Light	6 57	34 50	2 19	Rio de Janeiro	133	+ 2 35	+ 1 20	+ 3.9	+0.4	2.40

Number.	Interval. Mean. HWI.	Interval. Mean. LWI.	Interval. Tropic. HHWI.	Interval. Tropic. LLWI.	Range of tide. Mean (Mn).	Range of tide. Spring (Sg).	Range of tide. Neap (Np).	Range of tide. Great tropic (Gt).	Tropic diurnal inequality. HWQ.	Tropic diurnal inequality. LWQ.	Diurnal wave. Tropic HW interval.	Diurnal wave. Tropic range.	Mean sea level above plane of— Predictions.	Mean sea level above plane of— Tropic LLW.	Variation of the compass.
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	[7 31]	[1 30]	8 50*a*	0 55*a*	[0.8]	[1.0]	[0.6]	1.0	.....	.....	.....	0.9	0.5	0.5	2.0
2	8 04	2 24	8 52*a*	1 18*a*	0.7	0.8	0.6	1.3	0.7	0.5	10 50	0.9	0.3	0.6	2.0
3	8 11	1 54	8 39*a*	0 58*a*	0.8	1.0	0.7	1.5	0.8	0.5	.....	1.0	0.4	0.7	2.0
4	[7 35]	[1 40]	10 00*a*	11 30*b*	[0.6]	[0.8]	[0.4]	1.0	.....	.....	.....	0.9	0.4	0.5	2.0
5	8 23	2 15	8 58*a*	1 31*a*	1.1	1.3	0.9	1.8	0.8	0.7	11 03	1.0	0.6	0.9	1.5
6	7 55	2 09	8 53*a*	1 17*a*	1.1	1.4	0.8	1.3	0.4	0.1	.....	0.9	0.6	0.7	2.0
7	[8 00]	[3 12]	11 22*a*	0 15*a*	[0.3]	[0.5]	[0.1]	1.0	.....	.....	.....	0.9	0.4	0.5	1.5
8	[8 28]	[3 37]	11 44*a*	0 40*a*	[0.1]	[0.1]	[0.0]	0.9	.....	.....	12 20	0.8	0.3	0.4	1.5
9	.....	.....	11 45*a*	0 35*a*	[0.3]	[0.6]	[0.1]	1.0	.....	.....	.....	0.8	0.4	0.5	1.5
10	[8 30]	[3 32]	11 45*a*	0 35*a*	[0.7]	[0.9]	[0.5]	1.0	.....	.....	.....	0.8	0.4	0.5	1.5
11	7 57	1 55	8 01*a*	0 00*a*	0.8	1.2	0.8	1.3	0.6	0.3	.....	0.7	0.4	0.5	1.5
12	8 00	2 00	7 50*a*	0 38*a*	1.1	2.0	1.0	2.1	0.8	0.4	.....	0.9	0.6	0.8	1.5
13	[7 11]	[0 58]	8 49*a*	0 51*a*	[0.3]	.....	.....	1.2	.....	.....	11 05	1.1	0.4	0.6	2.5
14	.....	.....	9 00*a*	1 00*a*	[0.6]	.....	.....	1.5	.....	.....	.....	1.3	0.6	0.8	3.0
15	.....	.....	10 00*a*	2 00*a*	[0.8]	.....	.....	2.0	.....	.....	.....	1.4	0.7	1.0	3.0
16	.....	.....	11 00*a*	3 00*a*	[0.5]	.....	.....	1.3	.....	.....	.....	1.1	0.4	0.6	3.0
17	4 00	10 12	3 46*a*	10 59*a*	1.2	1.5	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	2.5
18	3 50	10 02	3 33*a*	10 59*a*	0.9	1.1	0.6	1.1	0.3	0.2	.....	0.8	0.4	0.5	2.5
19	2 50	9 05	2 36*a*	9 52*a*	1.2	1.6	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	2.0
20	2 50	9 02	2 39*a*	9 38*a*	2.3	3.0	1.5	2.9	1.2	0.4	.....	1.3	1.2	1.3	3.0
21	2 30	8 42	2 16*a*	9 29*a*	1.2	1.5	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	1.5
22	3 50	10 02	3 37*a*	10 45*a*	1.6	2.1	1.1	2.1	1.0	0.3	.....	1.1	0.8	0.9	1.5
23	0 51	6 23	0 35*b*	7 20*b*	0.8	1.0	0.6	1.3	0.3	0.2	.....	0.8	0.4	0.5	East. 5.0
24	0 06	6 18	—0 11*b*	7 15*b*	0.9	1.1	0.6	1.1	0.3	0.2	.....	0.8	0.4	0.5	5.0
25	11 30	5 17	11 16*a*	6 04*b*	1.2	1.5	0.8	1.7	0.9	0.3	.....	0.9	0.6	0.7	4.5
26	10 50	4 37	10 35*a*	5 26*b*	1.3	1.6	0.9	1.8	0.9	0.3	.....	1.0	0.8	0.8	4.0
27	5 05	11 17	5 04*b*	11 27*b*	2.0	2.5	1.5	2.0	0.3	0.1	.....	0.3	1.2	0.9	3.0
28	6 00	12 12	5 59*b*	12 20*b*	2.3	2.8	1.7	2.3	0.3	0.1	.....	0.3	1.4	1.1	2.0
29	4 20	10 35	4 27*b*	11 06*b*	1.3	1.6	1.0	1.5	0.4	0.3	.....	0.5	0.8	0.8	0.0
30	4 50	11 38	5 04*b*	12 32*b*	5.4	6.5	4.0	6.0	0.5	0.6	.....	0.8	3.2	3.0	1.0 W.
31	4 20	10 30	4 19*b*	10 38*b*	3.2	4.0	2.4	3.2	0.4	0.1	.....	0.4	2.0	1.5	West. 1.0
32	4 00	10 10	3 59*b*	10 20*b*	2.6	3.2	1.9	2.6	0.4	0.1	.....	0.4	1.6	1.2	1.0
33	4 18	9 50	4 08*b*	9 59*b*	6.4	8.6	3.9	7.1	0.6	0.7	.....	0.9	4.3	3.6	2.5
34	5 50	12 00	5 40*b*	12 09*b*	7.1	9.5	4.3	7.8	0.6	0.7	.....	0.9	4.8	3.9	4.0
35	4 27	10 30	4 17*b*	10 39*b*	4.5	6.0	2.7	4.9	0.6	0.7	.....	0.9	3.0	2.5	6.0
36	5 42	11 50	5 39*b*	11 55*a*	7.2	9.5	4.5	7.9	0.6	0.7	.....	0.9	4.8	4.0	6.5
37	6 28	2 30	6 26*b*	2 34*b*	14.5	19.0	9.1	15.6	0.9	1.0	.....	1.3	9.5	7.8	6.5
38	6 00	3 00	5 58*b*	3 08*b*	22.9	30.0	14.3	24.2	1.1	1.2	.....	1.6	15.0	12.1	6.5
39	8 30	5 30	8 28*b*	5 34*b*	10.9	14.3	6.8	11.8	0.8	0.9	.....	1.2	7.2	5.9	6.5
40	10 50	7 50	10 48*b*	7 54*b*	12.3	16.2	7.7	13.2	0.8	0.9	.....	1.2	8.1	6.6	6.0
41	10 40	4 28	10 38*b*	4 32*b*	7.9	10.4	4.9	8.7	0.7	0.9	.....	1.1	5.2	4.4	8.0
42	11 50	6 25	11 47*b*	6 30*b*	8.1	9.6	6.7	9.0	0.7	0.9	.....	1.1	4.8	4.6	7.0
43	6 14	0 02	6 12*b*	0 06*b*	10.7	14.1	6.7	11.6	0.8	1.0	.....	1.3	7.0	5.8	10.0
44	6 50	0 38	6 48*b*	0 42*b*	12.6	16.5	7.9	13.5	0.8	1.3	.....	1.9	8.2	9.1	10.5
45	5 35	11 47	5 33*b*	11 51*a*	10.0	13.1	6.2	10.9	0.8	1.0	.....	1.3	6.6	5.5	11.0
46	5 05	11 17	5 02*b*	11 22*a*	9.7	12.8	6.0	10.5	0.7	0.9	.....	1.1	6.4	5.3	12.0
47	5 18	11 30	5 16*b*	11 34*a*	9.8	12.9	6.1	10.6	0.7	0.9	.....	1.1	6.4	5.4	12.0
48	6 07	12 19	6 16*b*	12 12*a*	7.6	9.7	5.1	9.0	1.1	1.3	22 05	1.6	4.8	4.6	13.0
49	5 15	11 27	5 12*b*	11 32*a*	6.0	7.9	3.7	6.7	0.9	1.0	.....	1.3	4.0	3.4	13.0
50	5 20	11 32	5 17*b*	11 37*a*	6.6	8.6	4.1	7.3	0.6	0.8	.....	1.0	4.3	3.7	14.0
51	4 58	11 01	5 02*b*	11 00*a*	6.4	8.0	4.6	7.1	0.2	0.5	22 01	0.5	4.0	3.6	14.0
52	5 50	12 00	5 47*b*	12 05*a*	6.1	8.0	3.8	6.8	0.6	0.3	.....	0.7	4.0	3.3	14.5
53	4 45	10 57	4 42*b*	11 02*a*	6.5	8.5	4.1	7.2	0.6	0.3	.....	0.7	4.2	3.5	15.0
54	4 05	10 17	4 02*b*	10 22*a*	6.7	8.8	4.2	7.4	0.6	0.3	.....	0.7	4.4	3.6	16.5
55	5 00	11 12	4 57*a*	11 17*b*	6.0	7.9	3.7	6.7	0.6	0.3	.....	0.6	4.0	3.3	17.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	SOUTH AMERICA (South and East Coasts).										
	BRAZIL—continued.	South.	West.				Local time.		Mean Low Water Springs.		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Pernambuco (Recife Arsenal)	8 04	34 54	2 20	Rio de Janeiro	133	+ 2 08	+ 0 58	+ 3.1	+0.3	2.12
2	Maceio	9 35	35 41	2 23	Rio de Janeiro	133	+ 1 55	+ 0 40	+ 4.4	+0.4	2.60
3	San Francisco River Entrance	10 28	36 23	2 26	Rio de Janeiro	133	+ 1 52	+ 0 37	+ 3.9	+0.3	2.36
4	Bahia	12 58	38 31	2 34	Rio de Janeiro	133	+ 1 45	+ 0 30	+ 3.7	+0.3	2.52
5	Morro de Sao Paulo	13 21	38 54	2 36	Rio de Janeiro	133	+ 1 25	+ 0 08	+ 2.3	+0.1	1.84
6	Port Camamu	13 54	39 02	2 36	Rio de Janeiro	133	+ 1 25	+ 0 08	+ 2.6	+0.2	1.92
7	San Jorge dos Ilheos	14 47	39 03	2 36	Rio de Janeiro	133	+ 1 10	− 0 05	+ 2.6	+0.2	1.96
8	Santa Cruz	16 17	39 02	2 36	Rio de Janeiro	133	+ 1 00	− 0 15	+ 2.3	+0.1	1.84
9	Comoxatiba	17 06	39 10	2 37	Rio de Janeiro	133	+ 0 55	− 0 20	+ 2.0	0.0	1.72
10	Caravellas	17 43	39 09	2 37	Rio de Janeiro	133	+ 0 45	− 0 29	+ 2.6	+0.2	1.96
11	Abrolhos Island Light	17 57	38 40	2 35	Rio de Janeiro	133	+ 0 50	− 0 25	+ 2.9	+0.1	2.04
12	Aldeia Velha, Barra de Santa Cruz	19 55	40 08	2 41	Rio de Janeiro	133	+ 0 31	− 0 44	+ 0.7	−0.1	1.28
13	Victoria, Espirito Santo Bay	20 19	40 20	2 41	Rio de Janeiro	133	+ 0 26	− 0 51	+ 0.5	−0.1	1.20
14	Benevente	20 49	40 41	2 43	Rio de Janeiro	133	+ 0 16	− 0 59	+ 1.4	0.0	1.52
15	Itabapuana	21 20	40 59	2 44	Rio de Janeiro	133	+ 0 06	− 1 09	+ 1.6	0.0	1.60
16	Macahe	22 23	41 47	2 47	Rio de Janeiro	133	− 0 04	− 1 21	+ 0.9	−0.1	1.36
17	Porto Frio	22 58	42 00	2 48	Rio de Janeiro	133	+ 0 06	− 1 09	+ 0.9	−0.1	1.36
18	Rio de Janeiro	22 54	43 10	2 53	Rio de Janeiro	133	0 00	0 00	0.0	0.0	1.00
19	Parati, Ilha Grande Bay	23 13	44 42	2 59	Rio de Janeiro	133	− 0 49	− 2 04	+ 1.6	0.0	1.60
20	San Sebastiao	23 48	45 23	3 02	Rio de Janeiro	133	− 0 34	− 1 51	+ 0.5	−0.1	1.20
21	Santos	23 56	46 20	3 05	Rio de Janeiro	133	+ 0 26	− 0 51	+ 1.4	0.0	1.52
22	Paranagua	25 31	48 30	3 14	Rio de Janeiro	133	+ 0 32	− 0 45	+ 2.6	+0.2	1.96
23	Cape Joao Diaz, San Francisco R.	26 11	48 32	3 14	Rio de Janeiro	133	− 0 08	− 1 18	+ 1.2	0.0	1.44
24	Santa Catharina Island	27 27	48 31	3 14	Rio de Janeiro	133	+ 0 12	− 1 08	+ 2.2	+0.2	1.80
25	Rio Grande do Sul	32 07	52 04	3 28	Galveston	129	+ 5 04	+ 4 30	− 0.5	0.0	0.67
	URUGUAY.										
26	Castillo Bay	34 22	53 48	3 35	Buenos Aires	137	+ 1 29	+ 2 11	− 0.2	+0.2	0.83
27	Montevideo, Plata River	34 53	56 12	3 45	Buenos Aires	137	− 4 50	− 4 51	− 0.3	+0.1	0.78
28	Colonia, Plata River	34 28	57 52	3 51	Buenos Aires	137	− 0 20	+ 0 04	+ 1.8	+0.2	1.91
	ARGENTINA.										
29	Buenos Aires, Plata River	34 36	58 22	3 53	Buenos Aires	137	0 00	0 00	0.0	0.0	1.00
30	Barragan Bay, Plata River	34 49	57 54	3 52	Buenos Aires	137	− 0 50	− 0 41	+ 1.4	+0.2	1.69
31	San Boronbon Bay	35 54	57 22	3 49	Buenos Aires	137	− 2 20	− 1 51	+ 2.9	+0.3	2.47
32	Cape San Antonio	36 20	56 46	3 47	Buenos Aires	137	+ 3 00	+ 3 39	+ 3.0	+0.2	2.53
33	Point Mogotes	38 09	57 30	3 50	Sitka	169	− 2 54	− 2 56	− 0.5	−0.4	0.98
34	Port Belgrano, Bahia Blanca	38 58	61 51	4 08	Sitka	169	+ 4 07	+ 4 08	+ 4.8	+0.2	1.59
35	Point Medano, Rio Negro Entr	41 03	62 46	4 11	Sitka	169	+10 33	+10 34	+ 3.9	+0.1	1.49
36	Port San Antonio, San Matias Gulf	40 46	64 47	4 19	Sitka	169	+10 19	+10 20	+11.7	+1.1	2.37
37	Port San Josef, San Matias Gulf	42 23	64 20	4 17	Sitka	169	+ 9 49	+ 9 50	+16.3	+1.7	2.90
38	Port Madryn, Nuevo Gulf	42 45	64 59	4 20	Sitka	169	+ 6 49	+ 6 49	+ 2.5	−0.1	1.33
39	Port Santa Elena	44 31	65 22	4 21	Sitka	169	+ 3 34	+ 3 35	+ 5.7	+0.3	1.69
40	Port Desire	47 45	65 55	4 24	Sitka	169	− 0 16	− 0 16	+ 7.1	+0.5	1.85
41	Port San Julian	49 15	67 42	4 31	Sitka	169	− 2 06	− 2 05	+17.1	+1.7	2.98
42	Port Santa Cruz	50 08	68 23	4 34	Sitka	169	− 3 21	− 3 20	+26.0	+2.7	4.00
43	Coy Inlet	50 58	69 10	4 37	Sikta	169	− 3 41	− 3 41	+26.8	+2.9	4.08
44	Port Gallegos	51 33	69 01	4 36	Sitka	169	− 4 01	− 4 00	+31.3	+3.5	4.61
	CHILE.										
	Magellan strait.						*Time Meridian, 75° W.*				
45	Sarmiento Bank	52 30	68 03	4 32	Sitka	169	− 5 10	− 5 06	+24.9	+2.7	3.88
46	Cape Virgins	52 19	68 22	4 33	Sitka	169	− 4 51	− 4 49	+25.3	+2.7	3.91
47	Dungeness	52 24	68 26	4 34	Sitka	169	− 4 49	− 4 47	+25.8	+2.8	3.97
48	Cape Espiritu Santo	52 39	68 34	4 34	Sitka	169	− 4 48	− 4 46	+25.5	+2.7	3.93
49	Catherine Point	52 32	68 45	4 35	Sitka	169	− 4 43	− 4 41	+17.5	+1.7	3.03
50	Possession Bay, Stonewall Anch	52 16	69 10	4 37	Sitka	169	− 4 30	− 4 26	+25.5	+2.7	3.98
51	Direction Hill	52 21	69 29	4 38	Sitka	169	− 4 21	− 4 15	+24.5	+2.5	3.83
52	First Narrows	52 30	69 36	4 38	Sitka	169	− 4 17	− 4 10	+25.5	+2.7	3.98
53	Philip Bay, east side	52 40	69 37	4 38	Sitka	169	− 3 59	− 3 50	+ 6.7	+0.5	1.81
54	St. Jago Bay	52 32	69 55	4 40	Sitka	169	− 3 48	− 3 38	+ 8.5	+0.7	2.02
55	Gregory Bay	52 37	70 08	4 41	Sitka	169	− 3 38	− 3 27	+ 9.5	+0.7	2.12
56	Second Narrows	52 45	70 17	4 41	Sitka	169	− 3 11	− 2 57	+10.2	+1.0	2.32
57	Gracia Point	52 44	70 32	4 42	Sitka	169	− 2 53	− 2 39	− 2.1	−0.7	0.80
58	Pecket Harbor	52 47	70 48	4 43	Sitka	169	− 2 31	− 2 17	− 3.0	−0.8	0.71
59	Royal Road, Elizabeth Island	52 49	70 36	4 42	Sitka	169	− 2 36	− 2 22	− 2.1	−0.7	0.80

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	4 33	10 50	4 30*a*	10 56*b*	5.3	7.0	3.3	6.0	0.6	0.3	15 00	0.6	3.5	2.9	16.5
2	4 20	10 32	4 17*a*	10 37*b*	6.5	8.5	4.1	7.2	0.6	0.3	.....	0.7	4.2	3.5	16.0
3	4 17	10 29	4 14*a*	10 34*b*	5.9	7.8	3.7	6.6	0.6	0.3	.....	0.6	3.9	3.2	15.5
4	4 10	10 22	4 07*a*	10 27*b*	5.8	7.6	3.6	6.5	0.6	0.3	.....	0.6	3.8	3.2	14.0
5	3 50	10 00	3 46*a*	10 07*b*	4.6	6.0	2.9	5.2	0.5	0.3	.....	0.5	3.0	2.6	14.0
6	3 50	10 00	3 47*a*	10 06*b*	4.8	6.3	3.0	5.4	0.5	0.3	.....	0.6	3.2	2.7	14.0
7	3 35	9 47	3 32*a*	9 53*b*	4.9	6.4	3.1	5.5	0.5	0.3	.....	0.6	3.2	2.7	14.0
8	3 25	9 37	3 21*a*	9 44*b*	4.6	6.0	2.9	5.2	0.5	0.3	.....	0.5	3.0	2.6	14.0
9	3 20	9 32	3 17*a*	9 38*b*	4.3	5.6	2.7	4.9	0.5	0.3	.....	0.5	2.8	2.4	13.5
10	3 10	9 23	3 07*a*	9 29*b*	4.9	6.4	3.1	5.5	0.5	0.3	.....	0.6	3.2	2.7	13.5
11	3 15	9 27	3 12*a*	9 32*b*	5.1	6.6	3.3	5.7	0.6	0.5	.....	0.8	3.3	3.2	14.0
12	2 55	9 07	2 51*a*	9 15*b*	3.2	4.2	2.0	3.7	0.4	0.6	.....	0.7	2.1	1.9	12.5
13	2 50	9 00	2 46*a*	9 09*b*	3.0	4.0	1.9	3.5	0.4	0.7	.....	0.8	2.0	1.8	12.0
14	2 40	8 52	2 36*a*	8 59*b*	3.8	5.0	2.4	4.3	0.5	0.8	.....	0.9	2.5	2.2	12.0
15	2 30	8 42	2 27*a*	8 47*b*	4.0	5.3	2.5	4.5	0.5	0.9	.....	1.0	2.6	2.3	11.5
16	2 20	8 30	2 17*a*	8 35*b*	3.4	4.5	2.3	3.9	0.4	1.0	.....	1.1	2.2	4.0	11.0
17	2 30	8 42	2 26*a*	8 49*b*	3.4	4.5	2.3	3.9	0.3	1.1	.....	1.2	2.2	2.3	10.5
18	2 24	9 51	2 55*a*	9 38*b*	2.5	3.5	1.1	2.8	0.2	1.1	8 04	1.2	1.8	1.6	9.5
19	1 35	7 47	1 33*a*	7 52*b*	4.0	5.3	2.5	4.5	0.3	1.0	.....	1.1	2.6	2.4	8.5
20	1 50	8 00	1 46*a*	8 09*b*	3.0	4.0	1.9	3.5	0.4	1.0	.....	1.1	2.0	1.9	7.5
21	2 50	9 00	2 47*a*	9 06*b*	3.3	5.0	2.4	4.3	0.5	1.0	.....	1.1	2.5	2.6	7.0
22	2 55	9 05	2 52*a*	9 11*b*	4.9	6.4	3.1	5.5	0.5	1.0	.....	1.1	3.2	2.9	4.0
23	2 20	8 32	2 16*a*	8 39*b*	3.6	4.7	2.2	4.1	0.5	1.0	.....	1.1	2.4	2.2	4.0
24	2 35	8 47	2 32*a*	8 53*b*	4.5	5.9	2.8	5.1	0.5	1.0	.....	1.1	3.0	2.7	4.0W
25	[9 21]	[3 12]	11 25*b*	2 33*b*	[0.4]	[0.5]	[0.1]	1.0	.....	.....	1 38	0.9	0.3	0.6	0.5 E.
															East.
26	8 20	2 08	8 33*b*	1 27*b*	1.5	2.0	0.9	1.9	0.3	0.1	.....	0.3	1.0	0.9	2.5
27	2 00	7 30	2 20*b*	7 37*a*	1.4	1.7	1.1	1.5	0.3	0.6	19 36	1.0	0.9	1.7	5.0
28	6 30	0 00	6 42*b*	− 0 32*b*	3.4	4.0	2.7	4.7	1.8	0.8	.....	2.0	2.0	2.1	6.0
29	6 50	12 21	7 02*b*	11 38*a*	1.8	2.1	1.4	2.8	1.4	0.6	20 09	1.4	1.0	1.2	6.5
30	6 00	11 40	6 13*b*	11 06*a*	3.0	3.6	2.3	4.2	1.7	0.7	.....	1.9	1.8	1.9	6.5
31	4 30	10 30	4 40*b*	10 02*a*	4.4	5.2	3.4	5.9	2.1	0.9	.....	2.3	2.6	2.7	6.0
32	9 50	3 35	10 00*b*	3 07*a*	4.5	5.3	3.5	5.9	2.1	0.9	.....	2.3	2.6	2.7	6.0
33	9 48	3 33	9 30*b*	3 43*a*	7.6	9.8	5.1	7.7	1.3	2.1	.....	2.5	4.9	4.5	6.5
34	4 25	10 37	4 11*b*	10 45*b*	12.3	15.8	8.2	13.9	1.7	2.7	.....	3.2	7.9	6.7	10.0
35	10 50	4 38	10 35*b*	4 46*a*	11.5	14.7	7.7	13.0	1.6	2.6	.....	3.1	7.4	6.7	11.0
36	10 35	4 23	10 24*b*	4 30*a*	13.3	23.5	12.3	20.2	2.1	3.3	.....	3.9	11.8	10.4	12.0
37	10 05	3 53	9 55*b*	3 59*a*	22.4	28.7	15.0	24.5	2.3	3.6	.....	4.3	14.4	12.5	12.0
38	7 05	0 52	6 50*b*	1 01*a*	10.3	13.2	6.9	11.7	1.5	2.5	.....	2.9	6.6	6.0	12.0
39	3 50	10 03	3 37*b*	10 11*b*	13.1	16.8	8.8	14.7	1.7	2.8	.....	3.3	8.4	7.6	13.0
40	0 00	6 12	− 0 13*b*	6 19*b*	14.3	18.3	9.6	16.0	1.8	2.9	.....	3.4	9.2	8.4	14.5
41	10 35	4 23	10 25*a*	4 29*b*	23.0	29.5	15.4	25.2	2.3	3.7	.....	4.4	14.8	12.9	16.0
42	9 20	3 08	9 10*a*	3 13*b*	30.9	39.6	20.7	33.4	2.7	4.3	.....	5.1	19.8	17.1	16.5
43	9 00	2 47	8 51*a*	2 52*b*	31.2	40.0	20.9	33.7	2.7	4.3	.....	5.1	20.0	17.2	17.0
44	8 40	2 28	8 32*a*	2 33*b*	35.6	45.6	23.9	38.3	2.9	4.6	.....	5.4	22.8	19.5	17.0
45	8 00	1 48	7 51*a*	1 53*b*	30.0	38.5	20.1	32.4	2.6	4.2	.....	5.0	19.2	16.6	17.0
46	8 18	2 06	8 09*a*	2 11*b*	30.2	38.7	20.2	32.6	2.6	4.2	.....	5.0	19.4	16.7	17.0
47	8 19	2 07	8 10*a*	2 12*b*	30.7	39.4	20.6	33.2	2.7	4.3	.....	5.0	19.7	17.0	17.5
48	8 20	2 08	8 11*a*	2 13*b*	30.4	39.0	20.4	32.8	2.6	4.2	.....	5.0	19.5	16.8	17.5
49	8 24	2 12	8 14*a*	2 18*b*	28.4	30.0	15.7	25.6	2.3	3.7	.....	4.4	15.0	13.1	17.5
50	8 35	2 25	8 26*a*	2 30*b*	30.4	39.0	20.4	32.8	2.6	4.2	.....	5.0	19.5	16.8	17.5
51	8 43	2 35	8 34*a*	2 40*b*	29.6	38.0	19.8	32.0	2.6	4.2	.....	5.0	19.0	16.4	18.0
52	8 47	2 40	8 38*a*	2 45*b*	30.4	39.0	20.4	32.8	2.6	4.2	.....	5.0	19.5	16.8	18.0
53	9 05	3 00	8 52*a*	3 07*b*	14.0	18.0	9.4	15.7	1.8	2.9	.....	3.4	9.0	8.1	18.0
54	9 14	3 10	9 02*a*	3 17*b*	15.6	20.0	10.5	17.4	1.9	3.0	.....	3.6	10.0	8.9	18.0
55	9 23	3 20	9 11*a*	3 27*b*	16.4	21.0	11.0	18.2	1.9	3.1	.....	3.7	10.5	9.3	18.0
56	9 50	3 50	9 39*a*	3 57*b*	17.9	23.0	12.0	19.8	2.0	3.3	.....	3.8	11.5	10.2	18.5
57	10 07	4 07	9 47*a*	4 18*b*	6.2	7.9	4.2	7.3	1.2	1.9	.....	2.3	4.0	3.8	18.5
58	10 28	4 28	10 07*a*	4 40*b*	5.5	7.0	3.7	5.5	1.1	1.8	.....	2.1	3.5	3.4	18.5
59	10 24	4 24	10 04*a*	4 35*b*	6.2	8.0	4.2	7.3	1.2	1.9	.....	2.3	4.0	3.8	18.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	SOUTH AMERICA (SOUTH AND EAST COASTS)—Continued.										
	CHILE—continued.						*Time Meridian 75° W.*		*Mean Low Water Springs.*		
	Magellan Strait—Continued.	*South.*	*West.*								
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Santa Magdalena Island	52 56	70 35	4 42	Sitka	169	− 2 35	− 2 21	− 0.4	−0.4	1.00
2	Sandy Point	53 10	70 54	4 44	Sitka	169	− 1 55	− 1 41	− 4.8	−0.9	0.50
3	Port Famine	53 38	70 59	4 44	Sitka	169	− 1 00	− 0 46	− 3.9	−0.9	0.61
4	Cape San Isidro	53 47	70 55	4 44	Sitka	169	− 0 37	− 0 23	− 2.1	−0.7	0.80
5	Cape Froward	53 54	71 18	4 45	Sitka	169	− 0 04	+ 0 10	− 3.0	−0.8	0.71
6	Woods Bay	53 48	71 38	4 47	Sitka	169	+ 0 24	+ 0 35	− 2.1	−0.7	0.80
7	Port Gallant, Fortescue Bay	53 42	72 00	4 48	Sitka	169	+ 0 51	+ 1 00	− 2.1	−0.7	0.80
8	Borja Bay	53 32	72 29	4 50	Sitka	169	+ 1 27	+ 1 33	− 4.3	−0.9	0.56
9	Swallow Bay	53 30	72 48	4 51	Cape Horn	141	+11 05	+11 07	+ 0.2	0.0	1.07
10	Playa Parda Cove	53 19	73 00	4 52	Cape Horn	141	+10 44	+10 44	− 0.3	−0.1	0.95
11	Port Angosto	53 14	73 22	4 53	Cape Horn	141	+10 23	+10 22	− 0.7	−0.1	0.86
12	Sylvia Cove	52 59	73 33	4 54	Cape Horn	141	+10 15	+10 14	− 0.4	0.0	0.90
13	Port Tamar	52 56	73 45	4 55	Cape Horn	141	+10 11	+10 10	+ 1.2	0.0	1.26
14	Tuesday Bay	52 51	74 27	4 58	Cape Horn	141	+10 03	+10 02	+ 1.0	0.0	1.24
15	Cape Pillar	52 43	74 42	4 59	Cape Horn	141	+ 9 52	+ 9 52	− 0.7	−0.1	0.86
	DETACHED ISLANDS.						*Local Time.*				
16	As Rocas Reef Light	3 51	33 49	2 15	Kingstown	321	+ 6 42	+ 6 55	− 1.0	+0.2	0.85
17	Fernando Noronha	3 50	32 25	2 10	Kingstown	321	+ 6 37	+ 6 50	− 4.6	−0.2	0.51
18	Trinidad Islands	20 30	29 22	1 57	Apia	221	− 3 04	− 3 04	+ 0.6	+0.2	1.18
19	Martin Vaz Islets	20 29	28 53	1 56	Apia	221	− 3 09	− 3 09	+ 0.2	+0.2	1.02
20	South Georgia (Royal Bay)	54 31	36 01	2 24	Singapore	205	− 2 40	− 2 32	− 4.8	−1.0	0.29
	FALKLAND ISLANDS.										
21	Port Louis, Berkeley Sound	51 29	58 00	3 52	Sitka	169	− 7 11	− 7 27	− 5.4	−1.0	0.43
22	Bay of Harbors	52 15	59 16	3 57	Sitka	169	− 6 52	− 6 51	− 5.0	−1.0	0.48
23	Port Stephens	52 12	60 40	4 03	Sitka	169	− 5 07	− 5 06	− 2.9	−0.6	0.71
24	Port Egmont	51 18	60 05	4 00	Sitka	169	− 5 22	− 5 21	+ 0.3	−0.3	1.07
	ARGENTINA—continued.										
	Tierra del Fuego.										
25	San Sebastian Bay	53 15	68 27	4 34	Sitka	169	− 5 51	− 5 50	+ 8.5	+0.7	2.02
26	Cape Penas	53 52	67 33	4 30	Sitka	169	− 6 09	− 6 08	+ 1.1	−0.3	1.19
27	Cape San Diego	54 42	65 10	4 21	Sitka	169	− 8 21	− 8 20	− 0.4	−0.4	1.00
28	Staten Island, east end	54 45	63 46	4 15	Tientsin Entrance	189	−10 47	−11 25	− 1.5	−1.1	0.94
	CHILE—continued.						*Time Meridian 75° W.*				
29	Goree Road	55 12	67 05	4 28	Tientsin Entrance	189	−11 46	−12 24	− 2.4	−1.2	0.82
30	St. Martin Cove, Hermite I.	55 51	67 33	4 30	Cape Horn	141	+ 0 32	+ 0 14	0.0	0.0	1.02
31	CAPE HORN (Orange Bay)	55 31	68 05	4 32	Cape Horn	141	0 00	0 00	0.0	0.0	1.00
32	Diego Ramirez Islands	56 28	68 43	4 35	Cape Horn	141	+ 0 20	+ 0 20	+ 0.2	0.0	1.07
33	New Year Sound	55 30	69 06	4 36	Cape Horn	141	− 0 09	− 0 09	+ 0.2	0.0	1.07
34	Noir Island	54 26	73 03	4 52	Cape Horn	141	− 0 52	− 0 52	0.0	0.0	1.02
35	Week Island	53 12	74 21	4 57	Cape Horn	141	− 1 17	− 1 17	0.0	0.0	1.00
36	Evangelistas Island	52 21	75 08	5 01	Cape Horn	141	− 2 08	− 2 08	− 0.4	0.0	0.98
37	Guia Narrows	50 45	74 27	4 58	Cape Horn	141	− 0 56	− 0 29	+ 2.0	0.0	1.45
38	Port Henry, Gulf of Trinidad	50 03	75 18	5 01	Cape Horn	141	− 2 33	− 2 31	− 0.3	−0.1	0.95
39	English Narrows	49 04	74 21	4 57	Cape Horn	141	− 2 07	− 1 40	+ 1.2	0.0	1.26
40	Port Barbara, Penas Gulf	48 01	75 24	5 02	Cape Horn	141	− 2 47	− 2 45	+ 0.4	0.0	1.12
41	Port Otway, Penas Gulf	46 54	75 22	5 01	Cape Horn	141	− 2 53	− 2 51	+ 0.4	0.0	1.12
42	San Andres Bay	46 28	75 30	5 02	Cape Horn	141	− 2 57	− 2 55	0.0	0.0	1.02
43	Cape Taytao, Anna Pink Bay	45 47	75 06	5 00	Cape Horn	141	− 3 04	− 3 04	− 0.4	0.0	0.93
44	Vallenar Road	45 16	74 35	4 58	Cape Horn	141	− 3 16	− 3 16	− 0.4	0.0	0.93
45	Port Low	43 50	73 57	4 56	Cape Horn	141	− 3 13	− 3 11	+ 1.4	0.0	1.31
46	Huafo or No Mans Island	43 36	74 43	4 59	Valparaiso	145	+ 2 45	+ 2 46	+ 1.8	+0.2	1.55
47	Cucao Bay, Chiloe Island	42 40	74 06	4 56	Valparaiso	145	+ 2 37	+ 2 36	+ 1.1	+0.1	1.31
48	Port Quellon, Chiloe Island	43 08	73 39	4 55	Valparaiso	145	+ 3 31	+ 3 32	+ 9.6	+1.2	3.75
49	Castro, Chiloe Island	42 28	73 46	4 55	Valparaiso	145	+ 2 57	+ 3 08	+12.5	+1.5	4.61
50	Calbuco, Ancud Gulf	41 47	73 11	4 53	Valparaiso	145	+ 4 04	+ 4 15	+ 9.6	+1.2	3.78
51	Port Montt, Reloncavi Sound	41 30	72 56	4 52	Valparaiso	145	+ 3 31	+ 3 42	+13.4	+1.6	4.84
52	Chacao Narrows	41 49	73 32	4 54	Valparaiso	145	+ 3 45	+ 3 56	+10.7	+1.3	4.08
53	Port San Carlos de Ancud, Chiloe I.	41 52	73 51	4 55	Valparaiso	145	+ 3 00	+ 3 02	+ 1.8	+0.2	1.51
54	Maullin, Maullin River	41 36	73 36	4 54	Valparaiso	145	+ 3 15	+ 3 17	+ 3.6	+0.6	2.00
55	Bueno River Entrance	40 14	73 42	4 55	Valparaiso	145	+ 2 56	+ 2 55	+ 2.9	+0.3	1.84

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	10 25	4 25	10 07*a*	4 35*b*	7.7	9.9	5.2	8.9	1.3	2.1	.....	2.5	5.0	4.6	18.5
2	11 03	5 03	10 38*a*	5 17*b*	3.9	5.0	2.6	4.8	0.9	1.5	.....	1.8	2.5	2.6	18.5
3	11 58	5 58	11 35*a*	6 11*b*	4.7	6.0	3.1	5.7	1.0	1.7	.....	2.0	3.0	3.0	19.0
4	12 21	6 21	12 01*a*	6 32*b*	6.2	8.0	4.2	7.3	1.2	1.9	.....	2.3	4.0	3.8	19.0
5	0 28	6 58	0 07*b*	7 05*b*	5.5	7.0	3.7	6.5	1.1	1.8	.....	2.1	3.5	3.4	19.0
6	0 54	7 16	0 34*b*	7 27*b*	6.2	8.0	4.2	7.3	1.2	1.9	.....	2.3	4.0	3.8	19.5
7	1 20	7 40	1 00*b*	7 51*b*	6.2	8.0	4.2	7.3	1.2	1.9	.....	2.3	4.0	3.8	19.5
8	1 54	8 11	1 30*b*	8 25*b*	4.3	5.5	2.9	5.2	1.0	1.6	.....	1.9	2.8	2.8	19.5
9	1 58	8 08	1 38*b*	8 30*b*	4.5	5.0	3.9	6.0	1.7	1.2	.....	2.1	2.5	2.9	20.0
10	1 31	7 44	1 15*b*	8 07*b*	4.0	4.5	3.5	5.4	1.6	1.1	.....	2.0	2.2	2.6	20.0
11	1 09	7 21	0 52*b*	7 45*b*	3.6	4.0	3.1	4.9	1.5	1.1	.....	1.9	2.0	2.4	20.0
12	1 00	7 12	0 43*b*	7 36*b*	3.8	4.3	3.3	5.2	1.6	1.1	.....	2.0	2.2	2.5	20.0
13	0 55	7 07	0 41*b*	7 27*b*	5.3	6.0	4.6	6.9	1.9	1.3	.....	2.3	3.0	3.4	20.0
14	0 44	6 56	0 30*b*	7 16*b*	5.2	5.8	4.5	6.8	1.9	1.3	.....	2.3	2.9	3.3	20.0
15	0 32	6 45	0 15*b*	7 09*b*	3.6	4.0	3.1	4.9	1.5	1.1	.....	1.9	2.0	2.4	20.5
															West.
16	5 05	11 18	.....	.....	7.5	10.0	4.6	.....	.....	.....	.....	.....	5.0	.....	17.5
17	5 00	11 13	.....	.....	4.5	6.0	2.7	.....	.....	.....	.....	.....	3.0	.....	18.0
18	3 40	9 53	.....	.....	3.0	4.0	1.8	.....	.....	.....	.....	.....	2.0	.....	18.5
19	3 35	9 48	.....	.....	2.6	3.5	1.6	.....	.....	.....	.....	.....	1.8	.....	18.5
20	7 19	1 11	6 39*a*	1 23*b*	1.7	2.3	0.8	2.1	0.3	1.0	2 24	1.0	1.2	1.2	4.5
															East.
21	5 31	11 27	5 04*a*	11 43*a*	3.3	4.3	2.2	4.1	0.9	1.4	1 24	1.7	2.2	2.2	10.5
22	5 50	12 08	5 25*a*	12 18*a*	3.7	4.8	2.5	4.6	0.9	1.5	.....	1.7	2.4	2.4	11.5
23	7 35	1 23	7 14*a*	1 35*b*	5.5	7.1	3.7	6.5	1.1	1.8	.....	2.1	3.6	3.4	12.5
24	7 20	1 08	7 03*a*	1 18*b*	8.3	10.7	5.6	9.6	1.4	2.2	.....	2.6	5.4	4.9	12.0
25	6 50	0 38	6 38*a*	0 45*b*	15.6	20.0	10.5	17.4	1.9	3.0	.....	3.6	10.0	8.9	17.5
26	6 32	0 20	6 16*a*	0 29*b*	9.2	11.8	6.2	10.6	1.5	2.3	.....	2.8	5.9	5.4	17.0
27	4 20	10 33	4 02*a*	10 43*a*	7.7	9.9	5.2	8.9	1.3	2.1	.....	2.5	5.0	4.6	16.0
28	4 19	10 32	4 07*a*	10 49*a*	6.9	7.8	6.0	8.7	2.1	1.4	.....	2.6	3.9	4.2	15.0
29	3 50	10 03	3 37*a*	10 22*a*	6.0	6.7	5.2	7.7	2.0	1.4	.....	2.5	3.4	3.7	17.0
30	4 07	10 02	3 52*a*	10 24*a*	4.3	4.8	3.8	5.8	1.7	1.2	1 19	2.1	2.4	2.8	18.0
31	3 33	9 46	3 11*a*	9 22*a*	4.2	4.8	3.4	5.9	2.0	1.8	0 48	2.6	2.4	2.9	18.0
32	3 50	10 03	3 35*a*	10 24*a*	4.5	5.0	3.9	6.0	1.7	1.2	.....	2.1	2.5	2.9	18.0
33	3 20	9 33	3 05*a*	9 54*a*	4.5	5.0	3.9	6.0	1.7	1.2	.....	2.1	2.5	2.9	18.0
34	2 20	8 33	2 04*a*	8 55*a*	4.3	4.8	3.7	5.7	1.7	1.1	.....	2.1	2.4	2.7	20.0
35	1 50	8 03	1 34*a*	8 25*a*	4.2	4.7	3.7	5.6	1.7	1.1	.....	2.1	2.4	2.7	20.5
36	0 55	7 08	0 39*a*	7 31*a*	3.9	4.4	3.4	5.3	1.6	1.1	.....	2.0	2.2	2.5	20.5
37	2 10	8 50	1 57*a*	9 08*a*	6.1	6.9	5.3	7.5	2.0	1.4	.....	2.5	3.4	3.8	20.0
38	0 30	6 45	0 14*a*	7 07*a*	4.0	4.5	3.5	5.4	1.6	1.1	.....	2.0	2.2	2.6	20.0
39	1 00	7 40	0 46*a*	7 59*a*	5.3	6.0	4.6	6.9	1.9	1.3	.....	2.3	3.0	3.3	19.0
40	0 15	6 30	0 00*a*	6 51*a*	4.7	5.3	4.1	6.2	1.8	1.2	.....	2.2	2.6	3.0	19.5
41	0 10	6 25	— 0 05*a*	6 46*a*	4.7	5.3	4.1	6.2	1.8	1.2	.....	2.2	2.6	3.0	19.0
42	0 05	6 20	— 0 11*a*	6 42*a*	4.3	4.8	3.7	5.7	1.7	1.1	.....	2.1	2.4	2.7	19.0
43	0 00	6 13	— 0 16*a*	6 36*a*	3.9	4.4	3.4	5.3	1.6	1.1	.....	2.0	2.2	2.5	19.0
44	12 15	6 03	11 59*b*	6 26*a*	3.9	4.4	3.4	5.3	1.6	1.1	.....	2.0	2.2	2.5	18.5
45	12 20	6 10	12 07*b*	6 29*a*	5.5	6.2	4.8	7.1	1.9	1.3	.....	2.3	3.1	3.4	18.5
46	12 10	6 00	12 05*b*	6 29*a*	4.7	6.1	3.1	5.7	2.1	0.5	.....	2.1	3.0	2.5	18.0
47	12 05	5 53	11 59*b*	6 23*a*	4.0	5.2	2.6	4.9	1.9	0.4	.....	1.9	2.6	2.1	17.5
48	0 35	6 50	0 31*a*	7 14*a*	11.4	14.7	7.5	13.0	3.3	0.7	.....	3.3	7.4	5.9	17.5
49	0 01	6 21	— 0 02*a*	6 37*a*	14.0	18.0	9.1	15.7	3.6	0.8	.....	3.6	9.0	7.2	17.5
50	1 10	7 35	1 06*a*	7 58*a*	11.5	14.8	7.5	13.1	3.3	0.7	.....	3.3	7.4	6.0	17.0
51	0 38	7 03	0 35*a*	7 19*a*	14.7	19.0	9.7	16.5	3.7	0.8	.....	3.7	9.5	7.6	17.0
52	0 50	7 15	0 47*a*	7 32*a*	12.4	16.0	8.1	14.0	3.4	0.7	.....	3.4	8.0	6.4	17.0
53	0 04	6 20	— 0 01*a*	6 49*a*	4.6	5.9	3.0	5.6	2.1	0.5	.....	2.1	3.0	2.4	17.5
54	0 20	6 36	0 15*a*	7 01*a*	6.1	7.9	4.0	7.2	2.4	0.5	.....	2.4	4.0	3.2	17.5
55	0 00	6 13	— 0 05*a*	6 39*a*	5.6	7.2	3.7	6.7	2.3	0.5	.....	2.3	3.6	2.9	17.0

Number.	Station.	Geographic position. Latitude.	Geographic position. Longitude. Arc.	Geographic position. Longitude. Time.	Standard port for reference. Name.	Standard port for reference. Page.	Tidal differences. Time. HW.	Tidal differences. Time. LW.	Tidal differences. Height. HW.	Tidal differences. Height. LW.	Ratio of ranges.
	SOUTH AMERICA (WEST COAST)—Continued.										
	CHILE—continued.										
	West coast—Continued.	*South.*	*West.*				*Time meridian, 75° W.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Chaihuin Bay	39 58	73 37	4 54	Valparaiso	145	+1 30	+1 29	+0.4	0.0	1.09
2	Corral, Port Valdivia	39 53	73 27	4 54	Valparaiso	145	+0 55	+0 54	+1.4	+0.2	1.41
3	Valdivia	39 50	73 18	4 53	Valparaiso	145	+1 54	+1 50	0.0	0.0	0.99
4	Queule	39 23	73 14	4 53	Valparaiso	145	+0 47	+0 45	+0.8	0.0	1.25
5	Imperial or Cautin River Entrance	38 48	73 23	4 54	Valparaiso	145	+0 30	+0 28	+1.0	0.0	1.28
6	Mocha Island	38 20	73 57	4 56	Valparaiso	145	+0 52	+0 50	−0.6	−0.2	0.86
7	Lebu, Lebu River	37 37	73 42	4 55	Valparaiso	145	+0 46	+0 44	+0.8	0.0	1.25
8	Yañez Cove	37 22	73 41	4 55	Valparaiso	145	+0 41	+0 37	+1.2	0.0	1.35
9	Santa Maria Island Light	37 08	73 32	4 54	Valparaiso	145	+0 40	+0 36	+1.8	+0.2	1.55
10	Lota, Arauco Bay	37 06	73 11	4 53	Valparaiso	145	+0 34	+0 30	+0.8	0.0	1.25
11	Talcaguano, Concepcion Bay	36 43	73 08	4 53	Valparaiso	145	+0 33	+0 31	+1.2	0.0	1.35
12	Tomé, Concepcion Bay	36 37	72 59	4 52	Valparaiso	145	+0 33	+0 32	+1.0	0.0	1.28
13	Dichato, Coliumo Bay	36 32	72 58	4 52	Valparaiso	145	+0 34	+0 34	+0.8	0.0	1.25
14	Buchupureo	36 04	72 47	4 51	Valparaiso	145	+0 34	+0 35	−0.7	−0.1	0.79
15	Curanipe	35 48	72 38	4 51	Valparaiso	145	+0 48	+0 48	−0.5	−0.1	0.86
16	Maule River Entrance	35 19	72 25	4 50	Valparaiso	145	+0 11	+0 12	−0.3	−0.1	0.92
17	Constitucion, Maule River	35 20	72 24	4 50	Valparaiso	145	+0 32	+0 33	0.0	0.0	0.99
18	Llico	34 45	72 07	4 48	Valparaiso	145	+0 21	+0 23	+0.1	−0.1	1.05
19	Pichilemo	34 23	72 00	4 48	Valparaiso	145	+0 17	+0 17	0.0	0.0	1.02
20	Matanza Anchorage	33 58	71 54	4 48	Valparaiso	145	+0 13	−0 05	0.0	0.0	1.02
21	Toro Point	33 45	71 48	4 47	Valparaiso	145	+0 08	+0 09	−0.2	−0.2	0.95
22	Juan Fernandez Island	33 38	78 53	5 16	Valparaiso	145	+0 23	+0 24	−0.2	0.0	0.95
23	Port San Antonio	33 34	71 39	4 47	Valparaiso	145	+0 07	+0 08	0.0	0.0	1.02
24	Quintal Road	33 11	71 42	4 47	Valparaiso	145	+0 02	+0 03	0.0	0.0	0.99
25	VALPARAISO	33 02	71 39	4 47	Valparaiso	145	0 00	0 00	0.0	0.0	1.00
26	Quintero Bay	32 46	71 31	4 46	Valparaiso	145	−0 03	−0 02	+0.1	−0.1	1.05
27	Port Papudo	32 30	71 28	4 46	Valparaiso	145	−0 06	−0 05	+0.1	−0.1	1.05
28	Pichidanqui	32 06	71 33	4 46	Valparaiso	145	−0 08	−0 07	0.0	0.0	0.99
29	Vilos	31 54	71 32	4 46	Valparaiso	145	−0 12	−0 11	+0.2	0.0	1.09
30	Oscuro Cove	31 28	71 37	4 46	Valparaiso	145	−0 18	−0 17	+0.4	0.0	1.15
31	Tongoi	30 15	71 31	4 46	Valparaiso	145	−0 23	−0 22	+0.1	−0.1	1.05
32	Guayacan, Port Herradura	29 58	71 23	4 46	Valparaiso	145	−0 28	−0 27	+0.7	+0.1	1.18
33	Coquimbo	29 57	71 22	4 45	Valparaiso	145	−0 41	−0 40	+0.8	0.0	1.25
34	Totoralillo	29 29	71 21	4 45	Valparaiso	145	−0 49	−0 48	+0.8	0.0	1.25
35	Peña Blanco Road	28 43	71 23	4 46	Valparaiso	145	−1 09	−1 11	+0.4	0.0	1.09
36	Port Huasco	28 27	71 15	4 45	Valparaiso	145	−1 16	−1 18	+0.8	0.0	1.25
37	Port Carrizal Bajo	28 04	71 12	4 45	Valparaiso	145	−0 49	−0 50	+0.8	0.0	1.25
38	Port Copiapo	27 20	70 59	4 44	Valparaiso	145	−1 19	−1 21	+1.0	0.0	1.28
39	Caldera	27 04	70 52	4 43	Valparaiso	145	−0 51	−0 53	+0.8	0.0	1.25
40	Port Flamenco	26 34	70 44	4 43	Valparaiso	145	−0 41	−0 43	+1.0	0.0	1.28
41	Chañaral de las Animas	26 20	70 41	4 43	Valparaiso	145	−0 36	−0 38	+0.8	0.0	1.25
42	Lavata Bay	25 39	70 44	4 43	Valparaiso	145	−0 31	−0 33	+1.0	0.0	1.28
43	Port Taltal	25 25	70 34	4 42	Valparaiso	145	−0 22	−0 24	+0.8	0.0	1.25
44	Grande Point	25 07	70 30	4 42	Valparaiso	145	−0 07	−0 09	+1.0	0.0	1.28
45	Paposo	25 03	70 30	4 42	Valparaiso	145	−0 12	−0 14	+0.8	0.0	1.25
46	Blanco Encalada Road	24 22	70 34	4 42	Valparaiso	145	+0 08	+0 06	−0.4	0.0	0.89
47	Antofagasta, Moreno Bay	23 38	70 25	4 42	Valparaiso	145	−0 37	−0 39	+0.7	+0.1	1.18
48	San Luciano, Mejillones del Sur B.	23 06	70 28	4 42	Valparaiso	145	−0 07	−0 09	0.0	0.0	0.99
49	Cobija	22 34	70 18	4 41	Valparaiso	145	+0 01	−0 01	0.0	0.0	1.02
50	Tocopilla	22 05	70 13	4 41	Valparaiso	145	−0 48	−0 50	+0.8	0.0	1.22
51	Point Lobos	21 05	70 13	4 41	Valparaiso	145	−0 43	−0 45	+0.8	0.0	1.25
52	Iquique	20 12	70 10	4 41	Valparaiso	145	−1 08	−1 10	+1.0	0.0	1.28
53	Buena Cove	19 52	70 09	4 41	Valparaiso	145	−1 08	−1 10	+1.3	+0.1	1.38
54	Pisagua River	19 33	70 14	4 41	Valparaiso	145	−1 11	−1 12	+1.0	0.0	1.28
55	Arica	18 28	70 20	4 41	Valparaiso	145	−1 54	−1 55	+1.4	+0.2	1.41
	PERU.										
56	Ilo Road	17 35	71 23	4 46	Valparaiso	145	−1 43	−1 44	+1.2	0.0	1.35
57	Islay Road	16 58	72 10	4 49	Valparaiso	145	−1 56	−1 57	+2.0	+0.2	1.56
58	Port San Juan	15 20	75 09	5 01	Valparaiso	145	−2 36	−2 37	0.0	0.0	0.99
59	Pisco Bay	13 40	76 14	5 05	Valparaiso	145	−3 02	−3 03	−0.2	0.0	0.95
60	Callao Bay	12 02	77 09	5 09	Valparaiso	145	−3 27	−3 28	−0.4	0.0	0.89

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	11 00	4 48	10 54b	5 23a	3.3	4.3	2.2	4.2	1.8	0.4	.....	1.8	2.2	1.8	17.0
2	10 25	4 18	10 20b	4 43a	4.3	5.6	2.8	5.2	2.0	0.4	.....	2.0	2.8	2.3	16.5
3	11 25	5 10	11 18b	5 46a	3.0	3.9	2.0	3.8	1.7	0.4	.....	1.7	2.0	1.6	16.5
4	10 18	4 05	10 12b	4 37a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	16.5
5	10 00	3 47	9 54b	4 18a	3.9	5.0	2.5	4.8	1.9	0.4	.....	1.9	2.5	2.0	16.5
6	10 20	4 07	10 13b	4 46a	2.6	3.3	1.7	3.3	1.6	0.3	.....	1.6	1.6	1.4	16.5
7	10 15	4 02	10 09b	4 34a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	16.0
8	10 10	3 55	10 04b	4 26a	4.1	5.3	2.7	5.0	2.0	0.4	.....	2.0	2.6	2.3	16.0
9	10 10	3 55	10 05b	4 24a	4.7	6.0	3.0	5.7	2.1	0.5	.....	2.1	3.0	2.4	16.0
10	10 05	3 50	9 59b	4 22a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	16.0
11	10 04	3 51	9 58b	4 22a	4.1	5.3	2.7	5.0	2.0	0.4	.....	2.0	2.6	2.3	16.0
12	10 05	3 58	9 59b	4 24a	3.9	5.0	2.5	4.8	1.9	0.4	.....	1.9	2.5	2.0	16.0
13	10 06	3 55	10 00b	4 27a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	16.0
14	10 07	3 57	10 00b	4 36a	2.4	3.1	1.6	3.1	1.5	0.3	.....	1.5	1.6	1.3	16.5
15	10 21	4 10	10 14b	4 49a	2.6	3.4	1.7	3.3	1.6	0.3	.....	1.6	1.7	1.4	15.0
16	9 45	3 35	9 38b	4 11a	2.8	3.6	1.8	3.6	1.6	0.4	.....	1.6	1.8	1.5	15.0
17	10 06	3 56	9 59b	4 32a	3.0	3.9	2.0	3.8	1.7	0.4	.....	1.7	2.0	1.6	15.0
18	9 57	3 48	9 51b	4 22a	3.2	4.1	2.1	4.0	1.7	0.4	.....	1.7	2.0	1.7	15.0
19	9 53	3 42	9 47b	4 17a	3.1	4.0	2.0	3.9	1.7	0.4	.....	1.7	2.0	1.7	15.0
20	9 49	3 20	9 43b	3 55a	3.1	4.0	2.0	3.9	1.7	0.4	.....	1.7	2.0	1.7	15.0
21	9 45	3 35	9 38b	4 12a	2.9	3.7	1.9	3.7	1.6	0.4	.....	1.7	1.8	1.5	14.5
22	9 30	3 20	9 23b	3 57a	2.9	3.8	1.9	3.7	1.6	0.4	.....	1.7	1.9	1.6	17.0
23	9 44	3 34	9 38b	4 09a	3.1	4.0	2.0	3.9	1.7	0.4	.....	1.7	2.0	1.7	14.5
24	9 39	3 29	9 32b	4 05a	3.0	3.9	2.0	3.8	1.7	0.4	.....	1.7	2.0	1.6	14.5
25	9 37	3 26	9 30b	4 01a	3.0	3.9	2.0	3.8	1.7	0.4	21 02	1.7	2.0	1.6	14.5
26	9 35	3 25	9 29b	3 59a	3.2	4.1	2.1	4.0	1.7	0.4	.....	1.7	2.0	1.7	14.0
27	9 32	3 22	9 26b	3 56a	3.2	4.1	2.1	4.0	1.7	0.4	.....	1.7	2.0	1.7	14.0
28	9 30	3 20	9 23b	3 56a	3.0	3.9	2.0	3.8	1.7	0.4	.....	1.7	2.0	1.6	14.0
29	9 26	3 16	9 20b	3 51a	3.3	4.2	2.1	4.2	1.8	0.4	.....	1.8	2.1	1.7	14.0
30	9 20	3 10	9 14b	3 43a	3.5	4.5	2.3	4.4	1.8	0.4	.....	1.8	2.2	1.8	14.0
31	9 15	3 05	9 09b	3 39a	3.2	4.1	2.1	4.0	1.7	0.4	.....	1.7	2.0	1.7	13.5
32	9 10	3 00	9 04b	3 32a	3.6	4.7	2.4	4.5	1.8	0.4	.....	1.8	2.4	1.9	13.0
33	8 58	2 48	8 52b	3 20a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	13.0
34	8 50	2 40	8 44b	3 12a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	13.0
35	8 29	2 16	8 23b	2 51a	3.3	4.3	2.2	4.2	1.8	0.4	.....	1.8	2.2	1.8	13.0
36	8 23	2 10	8 17b	2 42a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	13.0
37	8 50	2 38	8 44b	3 10a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	13.0
38	8 21	2 08	8 15b	2 39a	3.9	5.0	2.5	4.8	1.9	0.4	.....	1.9	2.5	2.0	12.5
39	8 50	2 37	8 44b	3 09a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	12.5
40	9 00	2 47	8 54b	3 18a	3.9	5.0	2.5	4.8	1.9	0.4	.....	1.9	2.5	2.0	12.0
41	9 05	2 52	8 59b	3 24a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	12.0
42	9 10	2 57	9 04b	3 28a	3.9	5.0	2.5	4.8	1.9	0.4	.....	1.9	2.5	2.0	12.0
43	9 20	3 07	9 14b	3 39a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	11.5
44	9 35	3 22	9 29b	3 53a	3.9	5.0	2.5	4.8	1.9	0.4	.....	1.9	2.5	2.0	11.5
45	9 30	3 17	9 24b	3 49a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	11.5
46	9 50	3 37	9 44b	4 14a	2.7	3.5	1.8	3.4	1.6	0.3	.....	1.6	1.8	1.5	11.5
47	9 05	2 52	8 59b	3 24a	3.6	4.7	2.4	4.5	1.8	0.4	.....	1.8	2.4	1.9	11.5
48	9 35	3 22	9 28b	3 58a	3.0	3.9	2.0	3.8	1.7	0.4	.....	1.7	2.0	1.6	11.0
49	9 44	3 31	9 38b	4 06a	3.1	4.0	2.0	3.9	1.7	0.4	.....	1.7	2.0	1.7	10.5
50	8 55	2 42	8 49b	3 14a	3.7	4.8	2.4	4.6	1.9	0.4	.....	1.9	2.4	2.0	10.5
51	9 00	2 47	8 54b	3 18a	3.8	4.9	2.5	4.7	1.9	0.4	.....	1.9	2.4	2.0	10.0
52	8 35	2 22	8 29b	2 53a	3.9	5.0	2.5	4.8	1.9	0.4	.....	1.9	2.5	2.0	10.0
53	8 35	2 22	8 29b	2 52a	4.2	5.4	2.7	5.1	2.0	0.4	.....	2.0	2.7	2.2	9.5
54	8 32	2 20	8 26b	2 51a	3.9	5.0	2.5	4.8	1.9	0.4	.....	1.9	2.5	2.0	9.5
55	7 49	1 37	7 44b	2 07a	4.3	5.6	2.8	5.2	2.0	0.4	.....	2.0	2.8	2.3	9.0
56	7 55	1 43	7 49b	2 14a	4.1	5.3	2.7	5.0	1.9	0.4	.....	2.0	2.6	2.3	9.5
57	7 39	1 27	7 34b	1 56a	4.8	6.2	3.1	5.8	2.1	0.5	.....	2.1	3.1	2.5	9.5
58	6 47	0 35	6 40b	1 11a	3.0	3.9	2.0	3.8	1.7	0.4	.....	1.7	2.0	1.6	10.0
59	6 16	0 04	6 09b	0 41a	2.9	3.8	1.9	3.7	1.6	0.4	.....	1.7	1.9	1.6	10.0
60	5 47	12 00	5 40b	0 12a	2.7	3.5	1.8	3.4	1.6	0.3	.....	1.6	1.8	1.5	9.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	SOUTH AMERICA (WEST COAST)—Continued.						*Time meridian. 75° W.*		*Mean Low Water Springs.*		
	PERU—continued.	*South.*	*West.*								
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Huacho Bay	11 08	77 35	5 10	Valparaiso	145	−3 44	−3 45	−0.8	−0.2	0.76
2	Huarmey Bay	10 05	78 08	5 13	Valparaiso	145	−4 02	−4 08	−1.7	−0.3	0.53
3	Ferrol Bay	9 07	78 33	5 14	Valparaiso	145	−4 19	−4 20	−1.7	−0.3	0.53
4	Port Malabrigo	7 40	79 24	5 18	Valparaiso	145	−4 46	−4 47	−1.7	−0.3	0.53
5	Eten Point	6 55	79 52	5 19	Valparaiso	145	−5 00	−5 01	−1.4	−0.2	0.63
6	Paita	5 05	81 06	5 24	Valparaiso	145	−5 39	−5 40	−0.4	0.0	0.89
	ECUADOR.						*Local time.*				
7	Santa Clara Island	3 12	80 23	5 22	Valparaiso	145	−5 23	−5 24	+5.4	+0.6	2.57
8	Guayaquil	2 17	79 49	5 19	Valparaiso	145	−2 23	−2 12	+6.2	+0.8	2.80
9	Santa Elena Bay	2 11	80 56	5 24	Valparaiso	145	−6 23	−6 24	+3.6	+0.4	2.01
10	Port Manta	0 56	80 30	5 22	Valparaiso	145	−6 13	−6 14	+3.2	+0.4	1.91
11	Cape Pasado	0 22	80 30	5 22	Valparaiso	145	−6 08	−6 09	+5.4	+0.6	2.53
		North.									
12	Padernales	0 02	80 05	5 20	Valparaiso	145	−6 03	−6 04	+6.1	+0.7	2.76
13	Atacames Bay	0 53	79 54	5 20	Valparaiso	145	−5 58	−5 59	+7.8	+1.0	3.26
14	Santiago River	1 16	79 03	5 16	Valparaiso	145	−6 03	−6 04	+7.8	+1.0	3.26
	Galapagos Islands.	*South.*									
15	Charles Island	1 13	90 30	6 02	Valparaiso	145	−7 11	−7 12	+1.8	+0.2	1.55
16	Iguana Cove, Albemarle Island	0 58	91 29	6 06	Valparaiso	145	−7 21	−7 22	+2.0	+0.2	1.58
17	Chatham Island	0 47	89 27	5 58	Valparaiso	145	−7 02	−7 03	+2.2	+0.2	1.64
18	Indefatigable Island	0 30	90 15	6 01	Valparaiso	145	−7 21	−7 22	+2.0	+0.2	1.58
19	James Island, N. side	0 13	90 44	6 03	Valparaiso	145	−6 36	−6 37	+1.1	+0.1	1.31
	COLOMBIA—continued.	*North.*									
20	Tumaco Road	1 51	78 40	5 15	Panama	149	+0 18	+0 17	−2.6	−0.2	0.82
21	Buenaventura	3 52	77 08	5 08	Panama	149	+2 43	+2 42	−2.6	−0.2	0.82
22	Negrillas Rocks	3 52	77 24	5 10	Panama	149	+0 43	+0 42	−2.9	−0.3	0.79
23	Cabita Bay	5 28	77 28	5 10	Panama	149	+0 23	+0 22	−2.6	−0.2	0.81
24	Cupica Bay	6 35	77 23	5 10	Panama	149	+0 13	+0 12	−2.5	−0.3	0.83
	PANAMA AND CANAL ZONE—cont'd.						*Time meridian. 75° W.*				
25	Pinas Bay	7 34	78 11	5 13	Panama	149	+0 11	+0 10	−2.0	−0.2	0.86
26	Rey Island, Panama Gulf	8 17	78 54	5 16	Panama	149	−0 01	−0 02	−0.4	−0.1	0.96
27	Chepo River, Panama Gulf	8 59	79 07	5 16	Panama	149	+0 04	+0 03	0.0	0.0	1.00
28	PANAMA (Naos I.), Panama Gulf	8 55	79 32	5 18	Panama	149	0 00	0 00	0.0	0.0	1.00
29	Taboga, Panama Gulf	8 48	79 33	5 18	Panama	149	+0 01	0 00	−0.6	0.0	0.95
30	Chame Bay, Panama Gulf	8 38	79 47	5 19	Panama	149	+0 32	+0 30	−0.8	−0.2	0.94
31	Cape Mala, Panama Gulf	7 30	80 00	5 20	Panama	149	+0 13	+0 11	−2.6	−0.4	0.82
32	Bahia Honda	7 43	81 30	5 26	Panama	149	+0 19	+0 17	−4.4	−0.6	0.69
33	Parida Island	8 07	82 20	5 29	Panama	149	+0 27	+0 26	−5.0	−0.6	0.66
	NORTH AMERICA (WEST COAST).										
	COSTA RICA—continued.										
	West coast.						*Local time.*				
34	El Rincon Harbor, Gulf of Dulce	8 44	83 28	5 34	Panama	149	−0 31	−0 32	−5.4	−0.6	0.63
35	Uvita Bay	9 08	83 46	5 35	Panama	149	−0 56	−0 58	−5.8	−0.6	0.60
36	Port Herradura	9 39	84 39	5 39	Panama	149	−0 41	−0 42	−6.2	−0.8	0.56
37	Port Culebra	10 38	85 40	5 43	Panama	149	−0 31	−0 32	−6.2	−0.8	0.56
38	Port Elena	10 58	85 42	5 43	Panama	149	−0 26	−0 28	−5.8	−0.6	0.60
	NICARAGUA—continued.										
	West coast.										
39	Port San Juan del Sur	11 15	85 53	5 44	Panama	149	−0 16	−0 18	−5.4	−0.6	0.63
40	Corinto Harbor	12 28	87 12	5 49	Panama	149	−0 21	−0 22	−5.0	−0.6	0.66
	HONDURAS—continued.										
	West coast.										
41	Amapala	13 20	87 34	5 50	Panama	149	−0 16	−0 18	−4.4	−0.6	0.69
	SALVADOR.										
42	Port la Union	13 20	87 51	5 51	Panama	149	−0 01	−0 02	−5.0	−0.6	0.66
43	Libertad	13 29	89 19	5 57	Panama	149	−0 11	−0 12	−5.4	−0.6	0.63
44	Acajutla Bay	13 34	89 50	5 59	Panama	149	−0 21	−0 22	−5.8	−0.6	0.60

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	5 29	11 42	5 21b	12 28b	2.3	3.0	1.5	3.0	1.5	0.3	.....	1.5	1.5	1.3	9.0
2	5 08	11 21	4 59b	12 09b	1.6	2.1	1.1	2.2	1.2	0.3	.....	1.2	1.0	0.9	9.0
3	4 50	11 03	4 41b	11 51b	1.6	2.0	1.0	2.2	1.2	0.3	.....	1.2	1.0	0.9	9.0
4	4 19	10 32	4 10b	11 20b	1.6	2.1	1.1	2.2	1.2	0.3	.....	1.2	1.0	0.9	8.5
5	4 04	10 17	3 56b	11 00b	1.9	2.5	1.3	2.3	1.3	0.3	.....	1.3	1.2	1.1	8.5
6	3 20	9 33	3 13b	10 10b	2.7	3.5	1.8	3.4	1.6	0.3	.....	1.6	1.8	1.5	8.0
7	4 00	10 13	3 56b	10 35b	7.8	10.0	5.1	9.1	2.7	0.6	.....	2.7	5.0	4.1	7.5
8	7 00	1 00	6 56b	1 21a	8.5	11.0	5.6	9.8	2.8	0.6	.....	2.8	5.5	4.5	7.5
9	3 00	9 13	2 55b	9 38b	6.1	7.9	4.0	7.2	2.4	0.5	.....	2.4	4.0	3.2	7.5
10	3 10	9 23	3 05b	9 48b	5.8	7.5	3.8	6.9	2.3	0.5	.....	2.3	3.8	3.0	7.0
11	3 15	9 28	3 11b	9 50b	7.7	9.9	5.0	9.0	2.7	0.6	.....	2.7	5.0	4.0	7.0
12	3 20	9 33	3 16b	9 54b	8.4	10.8	5.5	9.7	2.8	0.6	.....	2.8	5.4	4.4	7.0
13	3 25	9 38	3 21b	9 58b	9.9	12.8	6.5	11.3	3.0	0.7	.....	3.1	6.4	5.2	6.5
14	3 20	9 33	3 16b	9 53b	9.9	12.7	6.5	11.3	3.0	0.7	.....	3.1	6.4	5.1	6.5
15	2 10	8 23	2 05b	8 52b	4.7	6.0	3.0	5.7	2.1	0.5	.....	2.1	3.0	2.4	8.0
16	2 00	8 13	1 55b	8 41b	4.8	6.2	3.1	5.8	2.1	0.5	.....	2.1	3.1	2.5	8.0
17	2 20	8 33	2 15b	9 01b	5.0	6.5	3.3	6.1	2.2	0.5	.....	2.2	3.2	2.6	8.0
18	2 00	8 13	1 55b	8 41b	4.8	6.2	3.1	5.8	2.1	0.5	.....	2.1	3.1	2.5	8.0
19	2 45	8 58	2 39b	9 28b	4.0	5.2	2.6	4.9	1.9	0.4	.....	1.9	2.6	2.1	8.0
20	3 35	9 48	3 29a	9 51a	10.3	13.2	7.1	10.4	0.5	0.9	.....	1.1	6.6	5.3	6.0
21	6 00	12 13	5 54a	12 16a	10.3	13.2	7.1	10.4	0.5	0.9	.....	1.1	6.6	5.3	5.5
22	4 00	10 13	3 55a	10 16a	10.0	12.8	6.9	10.1	0.5	0.9	.....	1.0	6.4	5.2	5.5
23	3 40	9 53	3 34a	9 56a	10.2	13.1	7.0	10.3	0.5	0.9	.....	1.1	6.6	5.3	5.5
24	3 30	9 43	3 24a	9 46a	10.4	13.3	7.2	10.5	0.5	0.9	.....	1.1	6.6	5.4	5.0
25	3 15	9 28	3 10a	9 31a	10.8	13.8	7.5	10.9	0.5	1.0	.....	1.1	6.9	5.6	5.0
26	3 00	9 13	2 55a	9 16a	12.3	15.7	8.5	12.4	0.6	1.0	.....	1.2	7.8	6.4	5.0
27	3 05	9 18	3 00a	9 21a	12.6	16.0	8.7	12.7	0.6	1.0	.....	1.2	8.0	6.4	5.0
28	2 59	9 13	2 54a	9 16a	12.6	15.9	8.7	12.9	0.6	1.1	28 22	1.2	8.0	6.6	5.0
29	3 00	9 13	2 55a	9 16a	12.0	15.4	8.3	12.1	0.6	1.0	.....	1.1	7.7	6.2	5.0
30	3 30	9 42	3 25a	9 46a	11.9	15.0	8.1	12.0	0.5	1.0	.....	1.1	7.5	6.0	5.0
31	3 10	9 22	3 04a	9 27a	10.3	13.0	7.0	10.4	0.5	0.9	.....	1.1	6.5	5.3	5.0
32	3 10	9 22	3 04a	9 27a	8.7	11.0	5.9	8.8	0.5	0.8	.....	1.0	5.5	4.4	5.5
33	3 15	9 28	3 09a	9 33a	8.3	10.5	5.7	8.4	0.5	0.8	.....	1.0	5.2	4.2	5.5
34	2 45	8 58	2 39a	9 03a	7.9	10.0	5.4	8.0	0.4	0.8	.....	0.9	5.0	4.0	5.5
35	2 20	8 32	2 14a	8 37a	7.5	9.5	5.1	7.6	0.4	0.8	.....	0.9	4.8	3.8	5.5
36	2 35	8 48	2 28a	8 53a	7.1	9.0	4.9	7.2	0.4	0.7	.....	0.9	4.5	3.6	5.5
37	2 45	8 58	2 38a	9 03a	7.1	9.0	4.9	7.2	0.4	0.7	.....	0.9	4.5	3.6	5.5
38	2 50	9 02	2 44a	9 07a	7.5	9.5	5.1	7.6	0.4	0.8	.....	0.9	4.8	3.8	5.5
39	3 00	9 12	2 54a	9 17a	7.9	10.0	5.4	8.0	0.4	0.8	.....	0.9	5.0	4.0	5.5
40	2 55	9 08	2 49a	9 13a	8.3	10.5	5.7	8.4	0.5	0.8	.....	1.0	5.2	4.2	5.5
41	3 00	9 12	2 54a	9 17a	8.7	11.0	5.9	8.8	0.5	0.8	.....	1.0	5.5	4.4	5.5
42	3 15	9 28	3 09a	9 33a	8.3	10.5	5.7	8.4	0.5	0.8	.....	1.0	5.2	4.2	5.5
43	3 05	9 18	2 59a	9 23a	7.9	10.0	5.4	8.0	0.4	0.8	.....	0.9	5.0	4.0	5.5
44	2 55	9 08	2 49a	9 13a	7.5	9.5	5.1	7.6	0.4	0.8	.....	0.9	4.8	3.8	5.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (WEST COAST)—Continued.										
	GUATEMALA—continued.										
	West coast.	*North.*	*West.*				*Local time.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	San Jose	13 56	90 49	6 03	Panama	149	−0 25	−0 27	− 6.2	− 0.8	0.56
2	Champerico	14 17	91 55	6 08	Panama	149	−0 25	−0 27	− 6.8	− 0.8	0.58
3	Soconusco Bar	15 05	92 54	6 12	Panama	149	−0 25	−0 27	− 7.2	− 0.8	0.50
	MEXICO—continued.										
	West coast.								*Mean Lower Low Water.*		
4	La Puerta	15 57	93 48	6 15	Panama	149	−0 25	−0 27	− 8.2	− 1.4	0.47
5	Salina Cruz	16 10	95 12	6 21	Panama	149	−0 25	−0 27	− 8.6	− 1.4	0.44
6	Port Sacrificios	15 41	96 14	6 25	Panama	149	−0 25	−0 27	− 9.4	− 1.4	0.37
7	Maldonado	16 33	96 45	6 35	Panama	149	−0 29	−0 30	−10.9	− 1.5	0.25
8	Acapulco	16 52	99 55	6 40	Panama	149	−0 34	−0 36	−12.6	− 1.6	0.13
9	Port Sihuatanejo	17 36	101 32	6 46	San Diego	153	−0 39	−0 39	− 2.8	− 0.6	0.45
10	Manzanillo	19 03	104 21	6 57	San Diego	153	−0 22	−0 22	− 2.5	− 0.5	0.47
11	Chamela or Perula Bay	19 32	105 07	7 00	San Diego	153	−0 22	−0 24	− 2.3	− 0.5	0.52
12	San Blas	21 29	105 17	7 01	San Diego	153	−0 21	−0 25	− 1.8	− 0.4	0.60
13	Mazatlan	23 11	106 27	7 06	San Diego	153	−0 14	−0 19	− 1.6	− 0.4	0.69
	Gulf of California.										
14	Altata, Culiacan River	24 38	107 58	7 12	San Diego	153	+0 45	+0 49	0.0	− 0.2	1.05
15	San Lorenzo Channel	24 22	110 20	7 21	San Diego	153	+0 13	+0 18	− 0.5	− 0.3	0.94
16	La Paz Harbor	24 20	110 22	7 21	San Diego	153	+0 18	+0 24	− 0.4	− 0.2	0.97
17	San Lucas Bay	27 14	112 13	7 29	San Diego	153	+1 53	+2 00	− 0.9	− 0.3	0.84
18	Guaymas Harbor	27 55	110 51	7 23	San Diego	153	+2 08	+2 16	− 0.7	− 0.3	0.89
19	Santa Teresa Bay	28 25	112 52	7 31	San Diego	153	+2 28	+2 37	+ 4.0	0.0	2.02
20	Puerto Refugio	29 33	113 35	7 34	San Diego	153	+3 28	+3 38	+ 4.4	0.0	2.12
21	Tepoca Bay	30 15	112 50	7 31	San Diego	153	+4 23	+4 34	+ 8.4	+ 0.4	3.09
22	Colorado River Entrance	31 45	114 48	7 39	San Diego	153	+5 19	+5 31	+16.6	+ 0.8	5.65
	Lower California, outer coast.										
23	San Jose del Cabo	23 03	109 42	7 19	San Diego	153	−0 46	−0 50	− 1.0	− 0.4	0.81
24	Pequeña Bay, Santa Margarite I	24 24	111 49	7 27	San Diego	153	−1 11	−1 17	+ 0.2	0.0	1.05
25	Magdalena Bay	24 34	112 09	7 29	San Diego	153	−1 04	−1 07	− 0.3	− 0.3	1.02
26	San Juanico Bay	26 15	112 28	7 30	Kodiak	173	−4 26	−4 21	− 4.0	− 1.0	0.57
27	Abreojos Pt., Ballenas Bay	26 43	113 34	7 34	Kodiak	173	−3 55	−3 50	− 3.2	− 1.0	0.68
28	San Bartolomé Bay	27 40	114 51	7 39	Kodiak	173	−3 55	−4 01	− 2.2	− 1.0	0.84
29	Cerros Island	28 12	115 14	7 41	San Diego	153	−0 16	−0 27	+ 2.4	+ 0.2	1.54
30	Playa Maria Bay	28 55	114 48	7 39	San Diego	153	−0 06	−0 16	+ 2.3	+ 0.2	1.49
31	Rosario Bay	29 54	115 43	7 43	San Diego	153	−0 02	−0 13	+ 1.1	+ 0.1	1.26
32	San Quentin Bay	30 25	115 54	7 44	San Diego	153	+0 02	−0 09	− 0.1	0.0	0.97
33	Colnett Bay	30 57	116 15	7 45	San Diego	153	+0 06	−0 04	+ 0.7	+ 0.1	1.15
34	Ensenada, Todos Santos Bay	31 51	116 36	7 46	San Diego	153	+0 09	−0 03	0.0	0.0	0.99
	CALIFORNIA.						*Time meridian 120° W.*				
35	San Diego Bar	32 40	117 14	7 49	San Diego	153	−0 03	−0 13	+ 0.1	0.0	1.02
36	SAN DIEGO, La Playa	32 42	117 14	7 49	San Diego	153	0 00	0 09	0.0	0.0	1.00
37	San Juan Capistrano	33 27	117 41	7 51	San Diego	153	+0 06	−0 08	− 0.1	0.0	0.97
	San Pedro Channel.										
38	Newport Landing	33 38	117 54	7 52	San Diego	153	+0 16	+0 07	− 0.4	− 0.1	0.92
39	Anaheim Landing	33 43	118 05	7 52	San Diego	153	+0 14	+0 02	+ 0.1	0.0	1.02
40	San Pedro	33 43	118 16	7 53	San Diego	153	+0 08	−0 03	+ 0.3	0.0	1.07
41	Santa Monica	34 01	118 30	7 54	San Diego	153	+0 10	+0 02	0.0	0.0	1.00
	Santa Barbara Channel.										
42	Hueneme Light	34 09	119 13	7 57	San Diego	153	+0 08	+0 03	−0.2	−0.1	0.97
43	San Buenaventura	34 16	119 17	7 57	San Diego	153	+0 29	+0 09	−0.2	−0.1	0.97
44	Santa Barbara Light	34 24	119 43	7 59	San Diego	153	+0 18	+0 05	−0.2	0.0	0.94
45	Gaviota	34 28	120 14	8 01	San Diego	153	+0 14	+0 08	−0.2	0.0	0.94
	Santa Barbara Islands.										
46	Santa Catalina Harbor, Catalina I	33 26	118 29	7 54	San Diego	153	+1 03	+0 55	0.0	0.0	1.00
47	Corral Harbor, San Nicholas I	33 17	119 31	7 58	San Diego	153	−0 08	−0 07	−0.2	−0.1	0.97
48	Prisoner Harbor, Santa Cruz I	34 01	119 41	7 59	San Diego	153	+0 05	−0 04	−0.2	−0.1	0.97
49	Cuyler Harbor, San Miguel I	34 03	120 21	8 01	San Diego	153	+0 03	−0 06	−0.2	−0.1	0.97

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	2 50	9 02	2 43a	9 07a	7.1	9.0	4.9	7.2	0.4	0.7	.....	0.9	4.5	3.6	5.5
2	2 50	9 02	2 43a	9 07a	6.7	8.5	4.6	6.8	0.4	0.7	.....	0.9	4.2	3.4	6.0
3	2 50	9 02	2 43a	9 07a	6.8	8.0	4.3	6.4	0.4	0.7	.....	0.8	4.0	3.2	6.0
4	2 50	9 02	2 43a	9 08a	5.9	7.5	4.0	6.0	0.4	0.7	.....	0.8	3.2	3.0	6.0
5	2 50	9 02	2 42a	9 08a	5.5	7.0	3.8	5.6	0.4	0.7	.....	0.8	3.0	2.8	6.0
6	2 50	9 02	2 42a	9 08a	4.7	6.0	3.2	4.8	0.3	0.6	.....	0.7	2.6	2.4	6.5
7	2 45	8 58	2 35a	9 06a	3.2	4.0	2.2	3.3	0.3	0.5	.....	0.6	1.8	1.7	7.0
8	2 40	8 52	2 27a	9 08a	1.6	2.0	1.1	1.6	0.2	0.4	.....	0.4	0.9	0.9	7.5
9	8 50	2 38	9 10a	2 39b	1.7	2.0	0.9	2.4	0.5	1.3	.....	1.5	1.2	1.3	8.0
10	9 07	2 54	9 50a	2 54b	1.8	1.9	1.3	2.8	0.3	1.5	.....	1.7	1.4	1.6	8.5
11	9 07	2 53	9 25a	3 00b	2.0	2.5	1.1	3.2	0.7	1.6	.....	1.8	1.5	1.7	9.0
12	9 08	2 52	9 00a	3 10b	2.3	3.2	1.0	3.3	0.9	1.7	.....	2.0	1.8	1.8	9.0
13	9 08	2 51	8 16a	3 20b	2.6	3.8	0.9	3.5	1.1	1.9	5 02	2.2	1.9	1.9	10.0
14	10 07	3 59	9 26a	4 22b	4.0	5.8	1.4	5.1	1.4	2.3	.....	2.7	2.8	2.8	10.5
15	9 35	3 28	8 51a	3 52b	3.6	5.3	1.2	4.7	1.3	2.2	.....	2.6	2.5	2.5	11.0
16	9 40	3 34	8 57a	3 58b	3.7	5.4	1.3	4.8	1.3	2.2	.....	2.6	2.6	2.6	11.0
17	11 15	5 10	10 27a	5 37b	3.2	4.7	1.1	4.2	1.2	2.1	.....	2.5	2.3	2.3	12.0
18	11 30	5 26	10 45a	5 51b	3.4	5.0	1.2	4.4	1.3	2.1	.....	2.5	2.4	2.4	12.0
19	11 50	5 47	11 20a	6 04b	7.7	11.2	2.6	9.3	1.9	3.2	.....	3.8	4.9	4.9	12.5
20	0 25	6 48	—0 04b	7 04b	8.1	11.8	2.8	9.7	2.0	3.3	.....	3.9	5.1	5.1	13.0
21	1 20	7 44	0 56b	7 58b	11.8	17.2	4.0	13.8	2.4	4.0	.....	4.7	7.3	7.2	13.0
22	2 15	8 40	1 57b	8 50b	21.6	31.5	7.3	24.2	3.2	5.3	.....	6.4	12.6	12.5	14.0
23	8 36	2 20	7 56a	2 57b	3.1	4.5	1.2	4.1	1.6	1.8	.....	2.5	2.2	2.1	10.5
24	8 17	1 59	7 31a	2 29b	4.0	5.8	2.4	6.1	1.9	2.9	.....	3.6	3.0	3.2	11.0
25	8 25	2 12	7 49a	2 45b	3.8	5.5	1.5	5.0	1.8	2.0	5 04	2.8	2.6	2.5	11.5
26	8 29	2 17	8 10a	2 33b	3.9	5.7	1.6	4.2	0.9	1.1	5 04	1.4	2.3	2.1	12.0
27	9 00	2 48	8 48a	3 01b	4.7	6.7	2.3	4.9	0.9	0.8	6 01	1.2	2.7	2.4	12.0
28	9 00	2 37	8 49a	2 48b	5.8	8.2	2.8	6.0	1.0	0.9	.....	1.3	3.2	4.0	12.5
29	9 06	2 42	8 28a	3 06b	5.9	7.8	3.5	8.4	2.3	3.6	.....	4.3	4.2	4.5	12.5
30	9 15	2 53	8 37a	3 18b	5.7	7.6	3.4	8.1	2.3	3.5	.....	4.3	4.1	4.3	13.0
31	9 19	2 56	8 38a	3 23b	4.8	6.4	2.9	7.0	2.1	3.2	.....	3.9	3.5	3.7	13.5
32	9 23	3 00	8 40a	3 30b	3.7	4.9	2.2	5.6	1.8	2.8	.....	3.4	2.8	3.0	13.5
33	9 27	3 05	8 44a	3 33b	4.4	5.8	2.6	6.5	2.0	3.1	.....	3.7	3.3	3.5	13.5
34	9 28	3 06	8 43a	3 40b	3.8	5.0	2.2	5.7	1.8	2.8	.....	3.4	2.9	3.1	14.0
35	9 29	3 07	8 46a	3 43b	3.9	5.2	2.3	5.9	1.9	2.9	.....	3.5	3.0	3.2	14.5
36	9 32	3 20	8 48a	3 55b	3.8	5.1	2.3	5.9	2.2	2.7	5 57	3.6	2.9	3.1	14.5
37	9 42	3 21	8 55a	3 51b	3.7	4.9	2.2	5.6	1.8	2.8	.....	3.4	2.9	3.0	15.0
38	9 45	3 24	8 57a	3 55b	3.5	4.7	2.1	5.4	1.8	2.7	.....	3.3	2.7	2.9	15.0
39	9 43	3 19	8 57a	3 49b	3.9	5.2	2.3	5.9	1.9	2.9	.....	3.5	3.0	3.2	15.5
40	9 36	3 13	8 51a	3 42b	4.1	5.5	2.5	6.2	1.9	3.0	.....	3.6	3.1	3.3	15.5
41	9 37	3 17	8 58a	3 45b	3.8	5.1	2.3	5.9	1.9	2.9	.....	3.5	2.9	3.1	15.5
42	9 32	3 15	8 45a	3 45b	3.7	4.9	2.2	5.6	1.8	2.8	.....	3.4	2.8	3.0	15.5
43	9 53	3 21	9 06a	3 51b	3.7	4.9	2.2	5.6	1.8	2.8	.....	3.4	2.8	3.0	15.5
44	9 37	3 15	8 49a	3 46b	3.6	4.8	2.2	5.5	1.8	2.8	.....	3.4	2.8	3.0	16.0
45	9 34	3 16	8 46a	3 47b	3.6	4.8	2.2	5.5	1.8	2.8	.....	3.4	2.8	3.0	16.0
46	9 28	3 08	8 41a	3 38b	3.8	5.1	2.3	5.9	1.9	2.9	.....	3.5	2.9	3.1	15.0
47	9 20	3 04	8 33a	3 34b	3.7	4.9	2.2	5.6	1.8	2.8	.....	3.4	2.8	3.0	15.5
48	9 29	3 06	8 42a	3 36b	3.7	4.9	2.2	5.6	1.8	2.8	.....	3.4	2.8	3.0	15.5
49	9 23	3 02	8 36a	3 32b	3.7	4.9	2.2	5.6	1.8	2.8	.....	3.4	2.8	3.0	15.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (WEST COAST)—Continued.										
	CALIFORNIA—continued.										
	Outer coast.	*North.*	*West.*				*Time meridian, 120° W.*		*Mean Lower Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Lompoc Landing	34 44	120 37	8 02	San Diego	158	+0 36	+ 0 38	−0.2	0.0	0.94
2	Point Sal	34 54	120 40	8 03	San Diego	158	+0 44	+ 0 47	−0.2	0.0	0.94
3	San Luis Obispo	35 11	120 44	8 03	San Diego	158	+0 59	+ 0 59	−0.2	−0.1	0.97
4	Morro, Morro Bay	35 21	120 50	8 03	San Diego	158	+1 13	+ 1 19	−0.2	−0.1	0.97
5	Cayucos, Estero Bay	35 27	120 55	8 04	San Diego	158	+1 16	+ 1 22	0.0	0.0	1.00
6	San Simeon	35 39	121 11	8 05	San Diego	158	+1 28	+ 1 31	0.0	0.0	1.05
7	Monterey Harbor Light	36 37	121 52	8 07	San Francisco Ent	157	−0 59	− 0 42	+0.2	+0.1	1.03
8	Santa Cruz Harbor Light	36 57	122 02	8 08	San Francisco Ent	157	−0 47	− 0 38	+0.6	+0.2	1.10
9	Half Moon Bay	37 30	122 27	8 10	San Francisco Ent	157	−0 51	− 0 39	+0.1	−0.1	1.05
10	Southeast Farallon Light	37 42	123 00	8 12	San Francisco Ent	157	−0 57	− 0 36	−0.1	+0.1	0.95
11	San Francisco Bar	37 46	122 38	8 11	San Francisco Ent	157	−0 01	− 0 07	−0.3	+0.1	0.90
	San Francisco Bay, S. portion.										
12	SAN FRANCISCO (Fort Point)	37 49	122 29	8 10	San Francisco Ent	157	0 00	0 00	0.0	0.0	1.00
13	Presidio	37 48	122 27	8 10	San Francisco Ent	157	+0 04	+ 0 04	0.0	−0.1	1.03
14	Alcatraz Light	37 49	122 25	8 10	San Francisco Ent	157	+0 11	+ 0 13	−0.3	0.0	0.92
15	San Francisco, North Beach	37 48	122 24	8 10	San Francisco Ent	157	+0 26	+ 0 29	−0.1	+0.1	0.95
16	San Francisco, Mission Street	37 48	122 24	8 10	San Francisco Ent	157	+0 28	+ 0 31	+0.4	+0.1	1.08
17	Goat Island (Yerba Buena Light)	37 48	122 22	8 09	San Francisco Ent	157	+0 28	+ 0 33	+0.2	+0.1	1.03
18	Oakland Harbor	37 47	122 16	8 09	San Francisco Ent	157	+0 35	+ 0 41	+0.7	+0.1	1.15
19	Point Avisadero	37 44	122 21	8 09	San Francisco Ent	157	+0 32	+ 0 40	+0.9	+0.2	1.18
20	Roberts Landing	37 41	122 10	8 09	San Francisco Ent	157	+0 50	+ 1 06	−0.6	0.0	0.85
21	Mt. Eden, Mt. Eden Slough	37 37	122 08	8 09	San Francisco Ent	157	+1 18	+ 1 44	+0.4	+0.2	1.05
22	Union City, Union City Creek	37 36	122 06	8 08	San Francisco Ent	157	+1 39	+ 2 07	−1.5	−0.1	0.64
23	San Mateo Point	37 35	122 19	8 09	San Francisco Ent	157	+0 45	+ 0 56	+1.5	+0.3	1.31
24	Guano Island	37 34	122 15	8 09	San Francisco Ent	157	+0 48	+ 1 10	+2.2	+0.4	1.46
25	Coyote Hill Creek Entrance	37 34	122 08	8 09	San Francisco Ent	157	+1 00	+ 1 16	+2.2	+0.4	1.46
26	Johnsons Land'g, Coyote Hill Creek	37 34	122 05	8 08	San Francisco Ent	157	+1 24	+ 1 45	+2.7	+0.4	1.59
27	Redwood City Creek Entrance	37 31	122 12	8 09	San Francisco Ent	157	+0 56	+ 1 11	+2.5	+0.3	1.56
28	Mayhews Landing, Newark Slough	37 32	122 04	8 08	San Francisco Ent	157	+1 14	+ 1 40	+2.4	+0.3	1.54
29	Ravenswood	37 28	122 06	8 08	San Francisco Ent	157	+0 57	+ 1 22	+2.4	+0.3	1.54
	San Francisco Bay, N. portion.										
30	Sausalito	37 51	122 29	8 10	San Francisco Ent	157	+0 05	+ 0 19	−0.4	−0.2	0.95
31	Angel Island	37 51	122 26	8 10	San Francisco Ent	157	+0 09	+ 0 27	−0.2	−0.1	1.05
32	West Berkeley	37 52	122 18	8 09	San Francisco Ent	157	+0 45	+ 0 51	+0.5	+0.1	1.10
33	Point San Quentin	37 56	122 29	8 10	San Francisco Ent	157	+0 58	+ 1 03	+0.3	+0.1	1.05
34	The Brothers Light	37 58	122 26	8 10	San Francisco Ent	157	+1 01	+ 1 06	+0.4	+0.1	1.08
	San Pablo Bay.										
35	McNears Landing	37 59	122 27	8 10	San Francisco Ent	157	+1 02	+ 1 04	+0.1	0.0	1.03
36	Point Wilson	38 01	122 19	8 09	San Francisco Ent	157	+1 40	+ 1 59	+0.8	0.0	1.21
37	Petaluma Point	38 06	122 29	8 10	San Francisco Ent	157	+1 06	+ 1 32	+0.7	+0.1	1.15
38	Sonoma Creek Entrance	38 09	122 24	8 10	San Francisco Ent	157	+1 22	+ 1 48	+0.7	+0.1	1.15
	Carquinez Strait.										
39	Mare Island Light	38 04	122 15	8 09	San Francisco Ent	157	+1 45	+ 2 05	+0.9	0.0	1.23
40	Wheatport	38 03	122 13	8 09	San Francisco Ent	157	+1 55	+ 2 19	+0.8	0.0	1.21
41	Benicia	38 03	122 08	8 09	San Francisco Ent	157	+2 20	+ 2 44	+0.8	0.0	1.21
	Suisun Bay.										
42	Seal Bluff	38 03	122 03	8 08	San Francisco Ent	157	+2 27	+ 3 05	+1.2	+0.2	1.26
43	Suisun Creek Entrance	38 07	122 04	8 08	San Francisco Ent	157	+2 39	+ 3 17	+1.0	+0.2	1.21
44	Antioch, San Joaquin River	38 01	121 49	8 07	San Francisco Ent	157	+3 54	+ 4 53	+0.1	+0.1	1.00
	Sacramento River.										
45	Collinsville	38 04	121 51	8 07	San Francisco Ent	157	+3 21	+ 4 15	+0.1	+0.1	1.00
46	Sacramento	38 33	121 30	8 06	San Francisco Ent	157	+8 03	+10 24	−2.8	−0.4	0.38
	Outer coast.										
47	Drakes Bay	38 01	122 53	8 12	San Francisco Ent	157	−0 04	+ 0 16	+0.6	+0.2	1.10
48	Point Reyes Light	38 00	123 01	8 12	San Francisco Ent	157	−0 14	+ 0 07	+0.3	+0.2	1.03
49	Tomales Bay	38 14	122 58	8 12	San Francisco Ent	157	+0 23	+ 0 49	−0.1	+0.1	0.95
50	Bodega Bay	38 18	123 00	8 12	San Francisco Ent	157	−0 18	+ 0 02	0.0	+0.1	0.97
51	Fort Ross	38 31	123 15	8 13	San Francisco Ent	157	−0 31	− 0 11	−0.1	+0.1	0.95

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	9 55	3 45	9 07*a*	4 16*b*	3.6	4.8	2.2	5.5	1.8	2.8	.....	3.4	2.8	3.0	16.0
2	10 02	3 53	9 14*a*	4 24*b*	3.6	4.8	2.2	5.5	1.8	2.8	.....	3.4	2.8	3.0	16.0
3	10 17	4 06	9 30*a*	4 35*b*	3.7	4.9	2.2	5.6	1.8	2.8	.....	3.4	2.8	3.0	16.0
4	10 31	4 25	9 44*a*	4 55*b*	3.7	4.9	2.2	5.6	1.8	2.8	.....	3.4	2.8	3.0	16.5
5	10 33	4 27	9 46*a*	4 57*b*	3.8	5.1	2.3	5.8	1.9	2.9	.....	3.5	2.9	3.1	16.5
6	10 38	4 34	9 52*a*	5 04*b*	4.0	5.3	2.4	6.1	1.9	2.9	.....	3.6	3.0	3.2	16.5
7	10 43	4 24	9 43*a*	4 43*b*	4.0	4.8	3.1	6.8	1.5	4.0	.....	4.3	3.4	3.9	17.0
8	10 54	4 27	9 57*a*	4 45*b*	4.3	5.2	3.3	7.1	1.5	4.1	.....	4.4	3.6	4.1	17.0
9	10 48	4 24	9 48*a*	4 43*b*	4.1	4.9	3.1	6.8	1.4	3.9	.....	4.2	3.2	3.8	17.5
10	10 40	4 25	9 38*a*	4 45*b*	3.7	4.5	2.9	6.3	1.4	3.8	.....	4.1	3.2	3.6	17.5
11	11 37	4 55	10 35*a*	5 16*b*	3.5	4.2	2.7	6.1	1.4	3.7	.....	4.0	3.1	3.5	17.5
12	11 39	5 08	10 34*a*	5 27*b*	3.9	4.8	3.0	6.2	1.3	3.7	6 40	4.0	3.2	3.6	17.5
13	11 43	5 07	10 40*a*	5 27*b*	4.0	4.9	3.1	6.5	1.4	3.9	7 06	4.2	3.2	3.7	17.5
14	11 50	5 16	10 46*a*	5 37*b*	3.6	4.4	2.8	6.2	1.4	3.8	.....	4.1	3.1	3.5	17.5
15	12 05	5 32	11 05*a*	5 51*b*	3.7	4.5	2.8	6.3	1.4	3.8	.....	4.1	3.2	3.6	17.5
16	12 07	5 34	11 08*a*	5 53*b*	4.2	5.1	3.2	7.1	1.5	4.0	.....	4.4	3.5	4.1	17.5
17	12 08	5 37	11 08*a*	5 56*b*	4.0	4.8	3.1	6.8	1.5	4.0	.....	4.3	3.4	3.9	17.5
18	12 15	5 45	11 19*a*	6 02*b*	4.5	5.4	3.6	7.3	1.6	4.0	.....	4.4	3.6	4.2	17.5
19	12 12	5 44	11 16*a*	6 02*b*	4.6	5.6	3.5	7.5	1.6	4.2	.....	4.6	3.8	4.4	17.5
20	0 05	6 10	−1 01*b*	6 31*b*	3.3	4.0	2.5	5.8	1.3	3.6	.....	3.9	2.9	3.2	17.5
21	0 33	6 48	−0 26*b*	7 07*b*	4.1	5.0	3.2	6.8	1.5	4.0	.....	4.3	3.5	4.0	17.5
22	0 55	7 12	−0 21*b*	7 36*b*	2.5	3.0	1.9	4.6	1.2	3.1	.....	3.4	2.4	2.7	17.5
23	0 00	6 00	−0 53*b*	6 17*b*	5.1	6.2	3.9	8.2	1.6	4.5	.....	4.8	4.1	4.8	17.5
24	0 08	6 14	−0 47*b*	6 31*b*	5.7	6.9	4.4	8.9	1.8	4.7	.....	5.1	4.5	5.2	17.5
25	0 15	6 20	−0 35*b*	6 37*b*	5.7	6.9	4.4	8.9	1.8	4.7	.....	5.1	4.5	5.2	17.5
26	0 40	6 50	−0 08*b*	7 06*b*	6.2	7.5	4.8	9.6	1.8	4.9	.....	5.3	4.8	5.5	17.5
27	0 11	6 15	−0 38*b*	6 31*b*	6.1	7.4	4.7	9.4	1.8	4.9	.....	5.3	4.6	5.4	17.5
28	0 30	6 45	−0 19*b*	7 02*b*	6.0	7.2	4.6	9.3	1.8	4.8	.....	5.2	4.6	5.4	17.5
29	0 13	6 27	−0 36*b*	6 44*b*	6.0	7.2	4.6	9.3	1.8	4.8	.....	5.2	4.6	5.4	17.5
30	11 44	5 22	10 45*a*	5 45*b*	3.7	4.5	2.9	6.0	1.5	3.5	6 59	3.8	2.9	3.4	18.0
31	11 48	5 30	10 50*a*	5 52*b*	3.8	4.6	3.0	6.2	1.5	3.5	.....	3.8	3.1	3.5	18.0
32	0 00	5 55	−0 53*b*	6 15*b*	4.3	5.2	3.4	7.1	1.7	3.9	.....	4.3	3.5	4.0	18.0
33	0 12	6 06	−0 42*b*	6 26*b*	4.1	4.9	3.2	6.8	1.6	3.8	.....	4.2	3.4	3.8	18.0
34	0 15	6 09	−0 38*b*	6 29*b*	4.2	5.0	3.3	6.9	1.6	3.9	.....	4.2	3.5	3.9	18.0
35	0 16	6 07	−0 30*b*	6 35*b*	4.0	4.8	3.1	6.8	1.5	4.0	.....	4.3	3.2	3.7	18.0
36	0 55	7 03	0 04*b*	7 22*b*	4.7	5.6	3.7	7.6	1.7	4.1	.....	4.5	3.6	4.3	18.0
37	0 20	6 35	−0 28*b*	6 59*b*	4.5	5.4	3.5	7.4	1.7	4.0	.....	4.4	3.6	4.2	18.0
38	0 36	6 51	−0 16*b*	7 11*b*	4.5	5.4	3.5	7.4	1.7	4.0	.....	4.4	3.6	4.2	18.0
39	1 00	7 09	0 10*b*	7 29*b*	4.8	5.6	3.7	7.6	1.7	4.1	.....	4.5	3.6	4.3	18.0
40	1 10	7 23	0 19*b*	7 42*b*	4.7	5.6	3.7	7.6	1.7	4.1	.....	4.5	3.6	4.3	18.0
41	1 35	7 48	0 43*b*	8 06*b*	4.7	5.6	3.7	7.6	1.7	4.1	.....	4.5	3.6	4.3	18.0
42	1 43	8 10	0 53*b*	8 29*b*	4.9	5.9	3.8	7.9	1.8	4.2	.....	4.6	3.9	4.5	18.0
43	1 55	8 22	1 04*b*	8 41*b*	4.7	5.6	3.7	7.6	1.7	4.1	.....	4.5	3.8	4.3	18.0
44	3 11	9 59	2 15*b*	10 20*b*	3.9	4.7	3.0	6.6	1.6	3.7	.....	4.1	3.3	3.7	18.0
45	2 38	9 21	1 42*b*	9 42*b*	3.9	4.7	3.0	6.6	1.6	3.7	.....	4.1	3.3	3.7	18.0
46	7 21	3 06	5 52*b*	3 39*a*	1.5	1.8	1.2	3.2	1.0	2.3	.....	2.5	1.6	1.8	17.0
47	11 33	5 17	10 36*a*	5 35*b*	4.3	5.2	3.3	7.1	1.5	4.1	.....	4.4	3.6	4.1	17.5
48	11 23	5 08	10 24*a*	5 27*b*	4.0	4.8	3.1	6.8	1.5	4.0	.....	4.3	3.4	4.0	17.5
49	12 00	5 50	10 58*a*	6 10*b*	3.7	4.5	2.9	6.3	1.4	3.8	.....	4.1	3.2	3.6	18.0
50	11 19	5 03	10 17*a*	5 23*b*	3.8	4.6	2.9	6.5	1.4	3.9	.....	4.2	3.3	3.7	18.0
51	11 05	4 49	10 03*a*	5 09*b*	3.7	4.5	2.9	6.3	1.4	3.8	.....	4.1	3.2	3.6	18.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (WEST COAST)—Continued.										
	CALIFORNIA—continued.										
	Outer coast—Continued.	*North.*	*West.*				*Time meridian, 120° W.*		*Mean Lower Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Point Arena Light	38 57	123 44	8 15	San Francisco Ent	157	−0 58	− 0 37	−0.5	0.0	0.87
2	Navarro River Entrance	39 12	123 45	8 15	San Francisco Ent	157	−0 55	− 0 33	−0.3	0.0	0.92
3	Little River Harbor	39 16	123 47	8 15	San Francisco Ent	157	−1 04	− 0 41	+0.2	+0.1	1.03
4	Mendocino Bay	39 18	123 47	8 15	San Francisco Ent	157	−0 59	− 0 34	−0.1	0.0	0.97
5	Fort Bragg Landing	39 26	123 49	8 15	San Francisco Ent	157	−0 34	− 0 08	+0.1	+0.1	1.00
6	Westport	39 38	123 47	8 15	San Francisco Ent	157	−0 34	− 0 14	+0.2	+0.1	1.03
7	Shelter Cove	40 02	124 03	8 16	San Francisco Ent	157	−0 43	− 0 22	+0.2	+0.1	1.03
8	Cape Mendocino Bay	40 26	124 25	8 18	San Francisco Ent	157	−0 31	− 0 05	+0.1	+0.1	1.00
9	Eel River Bar	40 38	124 19	8 17	Astoria	161	−1 28	− 1 45	−2.3	−0.3	0.69
10	Humboldt Bay Bar	40 45	124 15	8 17	Astoria	161	−1 05	− 1 21	−2.5	−0.4	0.67
11	Red Bluff, Humboldt Bay	40 45	124 13	8 17	Astoria	161	−0 59	− 1 15	−2.3	−0.3	0.69
12	Eureka, Humboldt Bay	40 48	124 10	8 17	Astoria	161	−0 41	− 0 55	−2.1	−0.3	0.72
13	Trinidad Harbor Light	41 03	124 09	8 17	Astoria	161	−1 11	− 1 29	−2.1	−0.3	0.72
14	Crescent City Light	41 45	124 12	8 17	Astoria	161	−1 06	− 1 25	−1.9	−0.2	0.73
	OREGON.										
15	Chetko Cove	42 03	124 16	8 17	Astoria	161	−0 57	− 1 15	−2.1	−0.2	0.70
16	Rogue River	42 25	124 25	8 18	Astoria	161	−0 55	− 1 00	−2.1	−0.2	0.70
17	Port Orford	42 44	124 30	8 18	Astoria	161	−1 05	− 1 24	−1.9	−0.3	0.75
18	Bandon, Coquille River	43 07	124 25	8 18	Astoria	161	−1 05	− 0 55	−2.5	−0.3	0.66
	Coos Bay.										
19	Coos Bay Bar	43 21	124 21	8 17	Astoria	161	−0 43	− 0 51	−1.9	−0.3	0.75
20	Empire	43 24	124 17	8 17	Astoria	161	0 00	+ 0 01	−2.9	−0.4	0.61
21	North Bend	43 25	124 14	8 17	Astoria	161	+0 40	+ 0 44	−2.7	−0.4	0.64
22	Marshfield	43 22	124 13	8 17	Astoria	161	+1 51	+ 1 19	−2.3	−0.3	0.69
	Umpqua River.										
23	Bar at Entrance	43 41	124 12	8 17	Astoria	161	−0 08	− 0 10	−1.6	−0.2	0.78
24	Gardiner	43 44	124 06	8 16	Astoria	161	+0 14	+ 0 27	−1.5	−0.2	0.80
	Outer coast.										
25	Siuslaw River Entrance	44 01	124 07	8 16	Astoria	161	−0 30	− 0 16	−1.4	−0.2	0.81
26	Alsea Harbor Entrance	44 28	124 06	8 16	Astoria	161	−0 38	− 0 49	−0.7	−0.1	0.91
	Yaquina Bay and River.										
27	Bar at Entrance	44 37	124 05	8 16	Astoria	161	−0 49	− 1 04	−0.7	−0.2	0.92
28	Newport	44 38	124 04	8 16	Astoria	161	−0 45	− 1 08	−0.5	−0.2	0.95
29	Yaquina City	44 36	124 02	8 16	Astoria	161	−0 32	− 0 41	−0.3	−0.1	0.97
30	Oysterville	44 35	124 01	8 16	Astoria	161	−0 19	− 0 20	−0.1	0.0	0.98
	Outer coast.										
31	Nestugga Bay Entrance	45 09	123 59	8 16	Astoria	161	−0 27	− 0 30	−0.7	−0.1	0.91
32	Hobsonville, Tillamook Bay	45 34	123 57	8 16	Astoria	161	−0 08	− 0 18	−0.1	0.0	0.98
33	Nehalem River Entrance	45 40	123 56	8 16	Astoria	161	−0 31	− 0 44	−0.5	−0.2	0.95
	OREGON AND WASHINGTON.										
	Columbia River.										
34	Columbia River Bar, Oreg	46 13	124 05	8 16	Astoria	161	−0 29	− 0 31	−0.5	−0.2	0.95
35	Point Adams (Clatsop), Oreg	46 12	123 59	8 16	Astoria	161	−0 09	− 0 12	−0.3	−0.1	0.97
36	Cape Disappointment, Wash	46 17	124 03	8 16	Astoria	161	−0 17	− 0 22	−0.3	−0.1	0.97
37	ASTORIA, Oreg	46 11	123 50	8 15	Astoria	161	0 00	0 00	0.0	0.0	1.00
38	Skeppernawin Creek, Oreg	46 10	123 55	8 16	Astoria	161	−0 02	+ 0 05	+0.1	0.0	1.02
39	Tongue Point, Oreg	46 13	123 46	8 15	Astoria	161	+0 19	+ 0 30	−0.3	−0.1	0.97
40	Marsh Island Creek, Oreg	46 14	123 35	8 14	Astoria	161	+0 41	+ 0 54	−0.7	−0.1	0.91
41	Three Tree Point, Wash	46 16	123 31	8 14	Astoria	161	+1 03	+ 1 16	−1.1	−0.2	0.86
42	Cathlamet, Wash	46 12	123 23	8 14	San Diego	153	+5 12	+ 6 11	+1.2	+0.1	1.28
43	Eagle Cliff, Wash	46 11	123 12	8 13	San Diego	153	+5 34	+ 7 06	0.0	0.0	0.99
44	Oak Point, Wash	46 11	123 11	8 13	San Diego	153	+5 49	+ 7 17	−0.2	−0.1	0.97
45	Rinearson, Oreg	46 08	123 05	8 12	San Diego	153	+6 12	+ 7 38	−0.7	−0.1	0.84
46	Rainier, Oreg	46 05	122 56	8 12	San Diego	153	+6 25	+ 7 59	−1.1	−0.2	0.76
47	Kalama, Wash	46 00	122 51	8 11	San Diego	153	+6 55	+ 8 28	−1.4	−0.2	0.68
48	St. Helens Bar, Oreg	45 51	122 48	8 11	San Diego	153	+7 56	+ 9 28	−2.1	−0.3	0.52
49	Willamette River Entrance, Oreg	45 39	122 46	8 11	San Diego	153	+9 27	+10 55	−3.2	−0.5	0.29
50	Old Fort Vancouver, Wash	45 37	122 39	8 11	San Diego	153	+9 58	+11 29	−3.5	−0.5	0.21

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	10 36	4 21	9 32a	4 42b	3.4	4.1	2.6	5.9	1.3	3.6	.....	3.9	3.0	3.3	18.0
2	10 39	4 25	9 35a	4 46b	3.6	4.4	2.8	6.2	1.4	3.8	.....	4.1	3.1	3.5	18.5
3	10 30	4 17	9 30a	4 36b	4.0	4.8	3.1	6.8	1.5	4.0	.....	4.3	3.4	3.9	18.5
4	10 35	4 24	9 33a	4 44b	3.8	4.6	2.9	6.5	1.4	3.9	.....	4.2	3.2	3.7	18.5
5	11 00	4 50	10 00a	5 09b	3.9	4.7	3.0	6.6	1.4	3.9	.....	4.2	3.3	3.8	18.5
6	11 00	4 44	10 00a	5 03b	4.0	4.8	3.1	6.8	1.5	4.0	.....	4.3	3.4	3.9	19.0
7	10 50	4 35	9 50a	4 54b	4.0	4.8	3.1	6.8	1.5	4.0	.....	4.3	3.4	3.9	19.0
8	11 00	4 50	10 00a	5 09b	3.9	4.7	3.0	6.6	1.4	3.9	.....	4.2	3.3	3.8	19.0
9	11 10	4 55	10 28a	5 15b	4.4	5.5	3.2	6.5	1.6	3.1	.....	3.5	3.3	3.6	19.0
10	11 33	5 19	10 51a	5 39b	4.3	5.3	3.1	6.4	1.6	3.0	.....	3.5	3.2	3.5	19.5
11	11 39	5 25	10 57a	5 45b	4.4	5.5	3.2	6.5	1.6	3.1	.....	3.5	3.3	3.6	19.5
12	11 57	5 45	11 16a	6 05b	4.6	5.7	3.3	6.7	1.6	3.1	.....	3.6	3.4	3.7	19.5
13	11 27	5 11	10 46a	5 31b	4.6	5.7	3.3	6.7	1.6	3.1	.....	3.6	3.4	3.7	19.5
14	11 33	5 15	10 58a	5 34b	4.7	5.8	3.4	6.9	1.6	3.2	.....	3.6	3.5	3.8	20.0
15	11 41	5 25	11 00a	5 45b	4.5	5.6	3.2	6.5	1.6	3.1	.....	3.5	3.4	3.6	20.0
16	11 42	5 39	11 01a	5 59b	4.5	5.6	3.2	6.5	1.6	3.1	.....	3.5	3.4	3.6	20.0
17	11 32	5 15	10 52a	5 34b	4.8	6.0	3.5	7.0	1.7	3.2	.....	3.7	3.5	3.8	20.0
18	11 32	5 44	10 50a	6 04b	4.2	5.2	3.0	6.3	1.6	3.0	.....	3.4	3.2	3.5	20.5
19	11 55	5 49	11 15a	6 08b	4.8	6.0	3.5	7.0	1.7	3.2	.....	3.7	3.5	3.8	20.5
20	0 18	6 41	− 0 31b	7 02b	3.9	4.8	2.8	5.9	1.5	2.9	.....	3.3	3.0	3.3	20.5
21	0 53	7 24	0 10b	7 45b	4.1	5.1	3.0	6.1	1.5	3.0	.....	3.4	3.1	3.4	20.5
22	2 04	7 59	1 22b	8 19b	4.4	5.3	3.2	6.5	1.6	3.1	.....	3.5	3.3	3.6	20.5
23	0 05	6 30	− 0 33b	6 48b	5.0	6.2	3.6	7.3	1.7	3.3	.....	3.7	3.7	4.0	21.0
24	0 36	7 08	− 0 03b	7 27b	5.1	6.3	3.7	7.4	1.7	3.3	.....	3.8	3.7	4.0	21.0
25	12 09	6 25	11 31a	6 43b	5.2	6.5	3.7	7.5	1.7	3.4	.....	3.8	3.8	4.1	21.5
26	12 01	5 52	11 25a	6 09b	5.8	7.2	4.2	8.2	1.8	3.5	.....	4.0	4.2	4.5	21.5
27	11 50	5 37	11 14a	5 54b	5.9	7.3	4.3	8.3	1.8	3.6	.....	4.1	4.2	4.7	21.5
28	11 54	5 38	11 19a	5 55b	6.1	7.6	4.4	8.6	1.9	3.6	.....	4.1	4.3	4.7	21.5
29	12 07	6 00	11 32a	6 17b	6.2	7.7	4.5	8.7	1.9	3.7	.....	4.2	4.4	4.8	21.5
30	12 20	6 21	11 45a	6 38b	6.3	7.8	4.5	8.8	1.9	3.7	.....	4.2	4.5	4.9	21.5
31	12 12	6 11	11 36a	6 28b	5.8	7.2	4.2	8.2	1.9	3.5	.....	4.0	4.2	4.5	22.0
32	12 31	6 23	11 56a	6 40b	6.3	7.8	4.5	8.8	1.9	3.7	.....	4.2	4.5	4.9	22.0
33	12 06	5 57	11 33a	6 14b	6.1	7.6	4.4	8.6	1.9	3.6	.....	4.1	4.3	4.7	22.0
34	12 10	6 10	11 35a	6 27b	6.1	7.6	4.4	8.6	1.9	3.6	.....	4.1	4.3	4.7	22.5
35	0 05	6 29	− 0 30b	6 46b	6.2	7.7	4.5	8.7	1.9	3.7	.....	4.2	4.4	4.8	22.5
36	12 22	6 19	11 47a	6 36b	6.2	7.7	4.5	8.7	1.9	3.7	.....	4.2	4.4	4.8	22.5
37	0 15	6 42	− 0 22b	6 58b	6.4	7.7	4.8	9.0	2.0	4.0	8 19	4.3	4.6	4.9	22.5
38	0 12	6 46	− 0 22b	7 02b	6.5	8.1	4.7	9.0	1.9	3.7	.....	4.3	4.6	4.9	22.5
39	0 34	7 12	− 0 01b	7 29b	6.2	7.7	4.5	8.7	1.9	3.7	.....	4.2	4.4	4.8	22.5
40	0 57	7 37	0 21b	7 54b	5.8	7.2	4.2	8.2	1.8	3.5	.....	4.0	4.2	4.5	22.5
41	1 19	7 59	0 42b	8 17b	5.5	6.8	4.0	7.9	1.8	3.5	.....	3.9	4.0	4.3	22.5
42	1 53	9 05	1 13b	9 24b	4.9	6.1	3.5	7.2	1.7	3.3	.....	3.7	3.6	3.9	22.5
43	2 16	10 01	1 31b	10 23b	3.8	4.7	2.7	5.8	1.5	2.9	.....	3.3	2.9	3.2	22.5
44	2 31	10 12	1 46b	10 34b	3.7	4.6	2.7	5.6	1.5	2.8	.....	3.2	2.8	3.1	22.5
45	2 55	10 34	2 06b	10 58b	3.2	4.0	2.3	5.0	1.4	2.6	.....	3.0	2.5	2.8	22.5
46	3 08	10 55	2 18b	11 19b	2.9	3.6	2.1	4.6	1.3	2.5	.....	2.8	2.3	2.6	22.0
47	3 39	11 25	2 45b	11 51b	2.6	3.2	1.9	4.2	1.2	2.4	.....	2.7	2.1	2.4	22.0
48	4 40	0 00	3 39b	0 30a	2.0	2.5	1.4	3.4	1.1	2.1	.....	2.4	1.7	1.9	22.0
49	6 11	1 30	4 46b	2 11a	1.1	1.4	0.8	2.1	0.8	1.5	.....	1.8	1.1	1.2	22.0
50	6 42	2 01	5 04b	2 48a	0.8	1.0	0.6	1.7	0.7	1.3	.....	1.5	0.9	1.0	22.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (WEST COAST)—Continued.										
	WASHINGTON—continued.	North.	West.				Time meridian, 120° W.		Mean Lower Low Water.		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Willapa Bay Entrance	46 38	124 06	8 16	Astoria	161	−0 14	−0 41	−0.3	−0.1	0.97
2	South Bend, Willapa Bay	46 40	123 48	8 15	Astoria	161	+0 30	−0 07	+1.1	0.0	1.17
3	Oysterville, Willapa Bay	46 32	124 02	8 16	Astoria	161	+0 21	−0 11	+1.0	0.0	1.16
4	Sealand, Willapa Bay	46 29	124 02	8 16	Astoria	161	+0 31	−0 01	+1.0	0.0	1.16
5	Grays Harbor Entrance	46 54	124 10	8 17	Astoria	161	−0 23	−0 55	+0.5	0.0	1.08
6	Hoquiam, Grays Harbor	46 58	123 53	8 16	Astoria	161	+0 12	−0 13	+1.9	0.0	1.30
7	Laidlaw, Grays Harbor	46 52	124 05	8 16	Astoria	161	−0 10	−0 13	+0.6	0.0	1.09
8	Destruction Island	47 40	124 30	8 18	Astoria	161	−0 37	−0 44	+0.9	0.0	1.14
9	Quillihute River	47 58	124 39	8 19	Astoria	161	−0 18	−0 38	+0.3	0.0	1.05
10	Cape Alava (Flattery Rocks)	48 10	124 44	8 19	Astoria	161	−0 29	−0 36	+0.7	0.0	1.11
	Juan de Fuca Strait.										
11	Cape Flattery Lt., Tatoosh Island	48 23	124 44	8 19	Astoria	161	−0 08	−0 22	−0.9	−0.2	0.89
12	Neah Bay	48 22	124 38	8 19	Astoria	161	−0 11	−0 20	−0.8	−0.2	0.91
13	Pysht River Entrance	48 13	124 07	8 16	Astoria	161	+1 08	+0 35	−1.3	−0.2	0.83
14	Port Angeles	48 08	123 26	8 14	Port Townsend	165	−1 34	−1 06	−2.9	−2.2	0.86
15	New Dungeness Light	48 11	123 07	8 12	Port Townsend	165	−1 04	−0 57	−3.3	−2.4	0.82
16	Washington Harbor	48 04	123 02	8 12	Port Townsend	165	−0 40	−0 29	−2.5	−2.2	0.94
17	Port Discovery	48 02	122 52	8 11	Port Townsend	165	−0 28	−0 20	−2.4	−2.2	0.96
18	Smith Island Light	48 19	122 51	8 11	Port Townsend	165	−0 07	−0 04	−2.7	−2.3	0.92
19	Partridge Point	48 14	122 46	8 11	Port Townsend	165	−0 01	−0 02	−2.3	−2.2	0.98
	Admiralty Inlet.								Two feet below Mean Lower Low Water.		
20	PORT TOWNSEND	48 07	122 45	8 11	Port Townsend	165	0 00	0 00	0.0	0.0	1.00
21	Marrowstone Point	48 06	122 41	8 11	Port Townsend	165	+0 09	+0 15	+0.4	0.0	1.10
22	Oak Bay	48 01	122 43	8 11	Port Townsend	165	+0 11	+0 19	+1.0	0.0	1.18
	Hood Canal.										
23	Port Ludlow	47 56	122 41	8 11	Port Townsend	165	+0 13	+0 24	+1.4	+0.2	1.24
24	Port Gamble	47 51	122 34	8 10	Port Townsend	165	+0 15	+0 27	+1.9	+0.3	1.31
25	Seabeck	47 38	122 49	8 11	Port Townsend	165	+0 47	+1 01	+3.4	+0.6	1.57
26	Union City	47 21	123 06	8 12	Port Townsend	165	+0 32	+0 59	+3.6	+0.6	1.59
	Puget Sound.										
27	Point No Point Light	47 55	122 32	8 10	Port Townsend	165	+0 19	+0 29	+1.8	+0.2	1.29
28	Port Madison	47 42	122 32	8 10	Port Townsend	165	+0 32	+0 50	+2.5	+0.1	1.47
29	West Point Light, Shilshole Bay	47 39	122 26	8 10	Port Townsend	165	+0 33	+0 57	+2.6	+0.2	1.49
30	Seattle, Elliott Bay	47 37	122 20	8 09	Port Townsend	165	+0 33	+0 59	+2.8	+0.2	1.51
31	Port Blakely	47 36	122 31	8 10	Port Townsend	165	+0 37	+0 56	+3.0	+0.2	1.53
32	Bremerton, Port Orchard Naval Sta.	47 34	122 37	8 10	Port Townsend	165	+0 39	+1 02	+2.6	0.0	1.53
33	Tacoma	47 16	122 26	8 10	Port Townsend	165	+0 44	+1 12	+2.9	0.0	1.57
34	Steilacoom	47 11	122 36	8 10	Port Townsend	165	+0 58	+1 31	+4.8	+0.8	1.80
35	Dofflemyer Point, Budd Inlet	47 08	122 54	8 12	Port Townsend	165	+1 05	+1 43	+6.7	+1.1	2.10
36	Olympia, Budd Inlet	47 04	122 54	8 12	Port Townsend	165	+1 09	+1 49	+6.8	+1.0	2.12
	Possession Sound and Port Susan.										
37	Muckilteo	47 57	122 18	8 09	Port Townsend	165	+0 15	+0 56	+2.4	+0.2	1.43
38	Tulalip	48 03	122 17	8 09	Port Townsend	165	+0 31	+1 08	+2.5	+0.1	1.47
39	Livingston Bay	48 14	122 27	8 10	Port Townsend	165	+0 51	+0 56	+4.6	+0.8	1.76
	Saratoga Passage.										
40	Holmes Harbor	48 08	122 33	8 10	Port Townsend	165	+0 29	+0 57	+4.0	+0.6	1.67
41	Coupeville	48 13	122 41	8 11	Port Townsend	165	+0 32	+1 08	+3.6	+0.6	1.61
	Skagit Bay.										
42	Utsalady	48 15	122 30	8 10	Port Townsend	165	+0 32	+1 08	+3.3	+0.5	1.55
43	La Conner	48 23	122 30	8 10	Port Townsend	165	+0 37	+1 06	+3.1	+0.5	1.51
44	Deception Pass	48 25	122 37	8 10	Port Townsend	165	+0 17	+0 32	+1.7	+0.6	1.22
	Rosario Strait, etc.								Mean Lower Low Water.		
45	Burrows Bay, Allan Island	48 29	122 42	8 11	Port Townsend	165	+0 16	+0 13	−2.0	−2.2	1.02
46	Anacortes, Fidalgo Island	48 31	122 36	8 10	Port Townsend	165	+0 14	+0 46	−0.6	−1.8	1.24
47	Thatcher Pass, Decatur Island	48 32	122 48	8 11	Port Townsend	165	+0 38	+0 28	−1.8	−2.0	1.06
48	Peavine Pass, Obstruction Island	48 36	122 48	8 11	Port Townsend	165	+0 41	+0 28	−1.6	−2.0	1.08
49	Strawberry Bay, Cypress Island	48 34	122 43	8 11	Port Townsend	165	+0 33	+0 28	−1.9	−2.1	1.04
50	Eagle Harbor, Cypress Island	48 35	122 42	8 11	Port Townsend	165	+0 43	+0 58	−1.6	−2.0	1.08

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
															East.
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	°
1	0 00	6 00	− 0 35b	6 17b	6.2	7.7	4.5	8.7	1.9	3.7	.....	4.2	4.4	4.8	23.0
2	0 45	6 35	0 13b	6 50b	7.5	9.3	5.4	10.3	2.1	4.0	.....	4.6	5.2	5.6	23.0
3	0 35	6 30	0 03b	6 45b	7.4	9.2	5.3	10.2	2.1	4.0	.....	4.5	5.1	5.5	23.0
4	0 45	6 40	0 13b	6 55b	7.4	9.2	5.3	10.2	2.1	4.0	.....	4.5	5.1	5.5	23.0
5	12 15	5 45	11 42a	6 01b	6.9	8.6	5.0	9.6	2.0	3.9	.....	4.4	4.8	5.2	23.0
6	0 26	6 28	0 04b	6 42b	8.3	10.3	6.0	11.2	2.2	4.2	.....	4.8	5.6	6.0	23.0
7	0 04	6 28	− 0 29b	6 44b	7.0	8.7	5.0	9.7	2.0	3.9	.....	4.4	4.9	5.3	23.0
8	12 00	5 55	11 28a	6 11b	7.3	9.1	5.3	10.0	2.0	4.0	.....	4.5	5.0	5.5	23.5
9	12 18	6 00	11 45a	6 16b	6.7	8.3	4.8	9.3	2.0	3.8	.....	4.3	4.7	5.2	24.0
10	12 07	6 02	11 35a	6 18b	7.1	8.8	5.1	9.8	2.0	3.9	.....	4.4	4.9	5.3	24.0
11	0 08	6 16	− 0 28b	6 34b	5.7	7.1	4.1	8.1	1.8	3.5	.....	4.0	4.1	4.4	24.0
12	0 00	6 18	− 0 36b	6 35b	5.8	7.2	4.2	8.2	1.8	3.5	.....	4.0	4.1	4.5	24.0
13	1 17	7 16	0 39b	7 34b	5.3	6.6	3.8	7.7	1.8	3.4	.....	3.9	3.8	4.2	24.0
14	2 10	8 23	3 41a	8 16b	4.4	5.3	3.4	8.3	1.0	7.5	.....	7.5	4.8	5.7	24.0
15	2 42	8 34	4 39a	8 27b	4.2	5.0	3.3	8.2	0.9	7.1	.....	7.1	4.6	5.3	24.0
16	3 06	9 02	4 55a	8 56b	4.8	5.8	3.7	9.1	1.0	7.6	.....	7.6	5.0	5.8	24.0
17	3 19	9 12	5 07a	9 06b	4.9	5.9	3.8	9.3	1.0	7.7	.....	7.7	5.1	5.9	24.0
18	3 40	9 28	5 35a	9 29b	4.7	5.6	3.7	9.0	1.0	7.5	.....	7.5	4.9	5.7	24.0
19	3 46	9 30	5 38a	9 34b	5.0	6.0	3.9	9.4	1.0	7.8	.....	7.8	5.2	6.0	24.0
20	3 47	9 32	5 39a	9 25b	5.1	6.1	3.9	10.0	1.2	8.3	9 26	8.1	7.4	6.3	23.5
21	3 56	9 47	5 37a	9 41b	5.6	6.7	4.4	10.3	1.1	8.2	.....	8.2	7.6	6.5	23.5
22	3 58	9 51	5 36a	9 45b	6.0	7.2	4.7	10.8	1.1	8.5	.....	8.5	7.9	6.8	23.5
23	4 00	9 56	5 35a	9 50b	6.3	7.6	4.9	11.3	1.2	8.7	.....	8.7	8.2	7.1	23.5
24	4 08	10 00	5 35a	9 55b	6.7	8.0	5.2	11.8	1.2	9.0	.....	9.0	8.5	7.4	23.5
25	4 34	10 33	5 58a	10 28b	8.0	9.6	6.2	13.6	1.3	9.8	.....	9.8	9.4	8.4	23.5
26	4 18	10 30	5 42a	10 25b	8.1	9.7	6.3	13.7	1.3	9.9	.....	9.9	9.5	8.5	23.5
27	4 07	10 02	5 40a	9 57b	6.6	7.9	5.2	11.7	1.2	8.9	.....	8.9	8.4	7.3	23.5
28	4 20	10 23	5 38a	10 18b	7.5	9.0	5.8	12.5	1.3	8.5	.....	8.5	8.7	7.6	23.5
29	4 21	10 30	5 33a	10 20b	7.6	9.1	5.9	12.6	1.4	8.6	.....	8.6	8.8	7.7	23.0
30	4 22	10 33	5 34a	10 24b	7.7	9.2	6.0	12.7	1.4	8.7	9 52	8.6	8.9	7.8	23.0
31	4 25	10 29	5 51a	10 24b	7.8	9.4	6.1	13.3	1.3	8.8	.....	8.8	9.0	8.3	23.0
32	4 27	10 35	5 49a	10 30b	7.8	9.4	6.1	13.3	1.3	8.0	.....	8.0	8.7	8.0	23.0
33	4 32	10 45	5 55a	10 40b	8.0	9.6	6.4	13.6	1.3	9.9	.....	9.9	8.9	8.2	23.0
34	4 46	11 04	6 05a	10 59b	9.2	11.0	7.2	15.2	1.4	10.5	.....	10.5	10.2	9.3	23.0
35	4 51	11 14	6 04a	11 19b	10.7	12.8	8.4	17.1	1.5	11.3	.....	11.3	11.3	10.5	23.0
36	4 55	11 20	6 08a	11 16b	10.8	13.0	8.4	17.3	1.5	11.4	.....	11.4	11.3	10.6	23.0
37	4 04	10 30	5 35a	10 25b	7.3	8.8	5.8	12.6	1.4	8.6	.....	8.6	8.7	7.7	23.5
38	4 20	10 42	5 49a	10 37b	7.5	9.0	5.8	12.6	1.4	8.6	.....	8.6	8.7	7.7	23.5
39	4 39	10 29	5 59a	10 24b	9.0	10.8	7.0	14.9	1.4	10.4	.....	10.4	10.1	9.1	23.5
40	4 17	10 30	5 39a	10 25b	8.5	10.2	6.6	14.3	1.3	10.1	.....	10.1	9.7	8.9	23.5
41	4 19	10 35	5 42a	10 30b	8.2	9.8	6.4	13.9	1.3	9.9	.....	9.9	9.5	8.6	24.0
42	4 20	10 36	5 46a	10 31b	7.9	9.5	6.2	13.5	1.3	9.7	.....	9.8	9.3	8.4	23.5
43	4 25	10 39	5 51a	10 34b	7.7	9.2	6.0	13.2	1.3	9.6	.....	9.6	9.2	8.3	24.0
44	4 05	10 05	5 50a	9 59b	6.2	7.4	4.9	11.2	1.2	8.7	.....	8.8	8.6	7.1	24.0
45	4 03	9 45	5 48a	9 39b	5.2	6.2	4.1	9.7	1.0	7.9	.....	7.9	5.3	6.2	24.0
46	4 02	10 19	6 00a	9 54b	6.3	7.5	5.0	11.3	1.2	8.7	.....	8.8	6.2	7.1	24.0
47	4 25	10 00	6 09a	9 54b	5.4	6.5	4.2	10.0	1.1	8.1	.....	8.1	5.5	6.3	24.0
48	4 28	10 00	6 11a	9 54b	5.5	6.6	4.3	10.1	1.1	8.1	.....	8.2	5.6	6.4	24.0
49	4 20	10 00	6 04a	9 54b	5.3	6.4	4.1	9.9	1.1	8.0	.....	8.0	5.4	6.3	24.0
50	4 30	10 30	6 13a	10 24b	5.5	6.6	4.3	10.1	1.1	8.1	.....	8.2	5.6	6.4	24.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (WEST COAST)—Continued.										
	WASHINGTON—continued.										
	Padilla Bay.	*North.*	*West.*				*Time meridian, 120° W.*		*Mean Lower Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Bayview	48 29	122 29	8 10	Port Townsend...	165	+1 02	+1 17	−1.6	−2.0	1.10
2	Hat Island	48 32	122 33	8 10	Port Townsend...	165	+0 42	+1 07	−1.8	−2.0	1.06
	Bellingham Bay.										
3	William Point, Samish Island	48 35	122 32	8 10	Port Townsend...	165	+0 47	+0 57	−2.3	−2.3	1.00
4	Chuckanut Bay	48 40	122 30	8 10	Port Townsend...	165	+0 57	+0 55	−2.4	−2.3	0.98
5	Bellingham	48 43	122 31	8 10	Port Townsend...	165	+0 59	+0 57	−2.4	−2.3	0.98
	Lummi Bay.										
6	Point Migley	48 45	122 43	8 11	Port Townsend...	165	+1 03	+1 01	−2.0	−2.2	1.02
7	Sandy Point	48 47	122 42	8 11	Port Townsend...	165	+1 06	+1 13	−1.9	−2.1	1.04
	Georgia Strait.										
8	Birch Bay	48 55	122 45	8 11	Port Townsend...	165	+1 09	+1 26	−1.6	−2.0	1.10
9	Drayton Harbor, Semiamoo Bay	49 00	122 46	8 11	Port Townsend...	165	+1 12	+1 38	−2.0	−2.6	1.12
	San Juan Channel.										
10	Cattle Point, San Juan Island	48 27	122 58	8 12	Port Townsend...	165	−0 18	−0 09	−2.2	−2.2	0.98
11	Green Point, Spieden Island	48 38	123 07	8 12	Port Townsend...	165	−0 03	+0 17	−1.6	−2.0	1.06
	Haro Strait.										
12	Kanaka Bay, San Juan Island	48 29	123 04	8 12	Port Townsend...	165	−0 16	−0 01	−2.0	−2.2	1.02
13	Roche Harbor, San Juan Island	48 37	123 08	8 13	Port Townsend...	165	−0 10	+0 06	−1.8	−2.0	1.06
14	Turn Point, Stuart Island	48 41	123 14	8 13	Port Townsend...	165	+0 06	+0 26	−1.4	−2.0	1.12
15	Alden Point, Patos Island	48 47	122 58	8 12	Port Townsend...	165	+0 31	+0 52	−1.4	−2.0	1.12
	BRITISH COLUMBIA.										
16	*Esquimalt Harbor, Vancouver I	48 26	123 27	8 14	Port Townsend...	165	+6 50	−0 36	−5.4	−2.2	0.68
17	*Victoria Harbor, Vancouver Island	48 25	123 23	8 14	Port Townsend...	165	+6 39	−0 32	−5.4	−2.8	0.74
18	*Discovery Island Light	48 25	123 13	8 13	Port Townsend...	165	+8 32	−0 34	−5.7	−2.2	0.65
19	Active Pass, Mayne Island	48 52	123 18	8 13	Port Townsend...	165	+1 20	+1 45	−1.3	−2.1	1.16
20	Cowichin Harbor, Vancouver I	48 46	123 37	8 14	Port Townsend...	165	+1 20	+1 46	−1.3	−2.1	1.16
21	Maple Bay, Vancouver Island	48 50	123 36	8 14	Port Townsend...	165	+1 26	+1 53	−1.3	−2.1	1.16
22	Oyster Harbor, Vancouver Island	49 00	123 48	8 15	Port Townsend...	165	+1 47	+2 17	−0.7	−2.0	1.26
23	North Sand Heads Light, Fraser R.	49 05	123 16	8 13	Port Townsend...	165	+1 26	+1 53	−1.3	−2.2	1.18
24	Atkinson Point Lt., Burrard Inlet	49 20	123 16	8 13	Port Townsend...	165	+1 35	+2 05	−0.5	−2.1	1.31
25	Vancouver, Burrard Inlet	49 17	123 11	8 13	Port Townsend...	165	+1 43	+2 31	−0.3	−2.0	1.33
26	Port Graves, Gambier I., Howe Sd	49 29	123 24	8 14	Port Townsend...	165	+1 54	+2 29	+0.7	−1.9	1.51
27	Watts Point, Howe Sound	49 41	123 13	8 13	Port Townsend...	165	+2 05	+2 50	+1.5	1.8	1.65
28	Nanaimo Harbor, Vancouver I	49 10	123 57	8 16	Port Townsend...	165	+0 58	+1 38	+1.5	−1.8	1.65
29	Nanoose Harbor, Vancouver I	49 16	124 10	8 17	Port Townsend...	165	+1 11	+1 51	+1.9	−1.7	1.71
30	Pender Harbor, Malaspina Strait	49 38	124 03	8 16	Port Townsend...	165	+2 18	+1 48	+1.7	−1.8	1.69
31	Port Augusta, Vancouver Island	49 37	124 51	8 19	Port Townsend...	165	+1 06	+1 36	+2.3	−1.7	1.78
32	Baker Passage, Hernando Island	50 01	124 57	8 20	Port Townsend...	165	+2 02	+2 37	+2.9	−1.6	1.88
33	Surge Narrows, Read Island	50 16	125 07	8 20	Port Townsend...	165	+2 05	+2 37	+3.5	−1.5	1.98
34	Rendezvous Islands	50 17	125 05	8 20	Port Townsend...	165	+3 02	+2 02	+3.5	−1.5	1.98
35	Stuart Island, Bute Inlet	50 23	125 09	8 21	Port Townsend...	165	+2 02	+2 51	+3.5	−1.5	1.98
36	Waddington Harbor, Bute Inlet	50 05	124 52	8 19	Port Townsend...	165	+3 16	+4 11	+3.5	−1.5	1.98
37	Gowlland Har., Discovery Passage	50 05	125 16	8 21	Port Townsend...	165	+1 08	+0 53	−0.9	−1.9	1.20
38	†SEYMOUR NARROWS, Discovery P	50 08	125 23	8 22	Port Townsend...	165	−0 57	−0 30	−0.1	−1.8	1.33
39	Cameleon Harbor, Nodales Chan	50 20	125 20	8 21	Sitka	169	+3 03	+2 21	+4.1	+0.3	1.48
40	Knox Bay, Thurlow Island	50 24	125 39	8 23	Sitka	169	+3 55	+4 03	+5.2	+0.4	1.62
41	Beaver Creek, Loughboro Inlet	50 31	125 38	8 23	Sitka	169	+3 45	+3 51	+3.7	+0.3	1.42
42	Forward Harbor	50 29	125 47	8 23	Sitka	169	+3 15	+3 23	+4.2	+0.4	1.49
43	Topaz Harbor	50 32	125 48	8 23	Sitka	169	+3 15	+3 23	+4.2	+0.4	1.49
44	Port Neville	50 31	126 04	8 24	Sitka	169	+2 46	+2 51	+5.2	+0.4	1.62
45	Port Harvey, Call Creek	50 34	126 17	8 25	Sitka	169	+2 12	+2 15	+3.7	+0.3	1.42
46	Sergeaunt Passage	50 42	126 11	8 25	Sitka	169	+2 02	+2 05	+3.8	+0.3	1.37
47	Farewell Harbor, Blackfish Sd	50 36	126 42	8 27	Sitka	169	+1 34	+1 36	+4.6	+0.4	1.54
48	Dusky Cove, Bonwick Island	50 42	126 40	8 27	Sitka	169	+1 27	+1 29	+4.2	+0.4	1.49
49	Sunday Harbor, Crib Island	50 44	126 42	8 27	Sitka	169	+1 19	+1 20	+4.2	+0.4	1.49
50	Cullen Harbor, Fife Sound	50 46	126 45	8 27	Sitka	169	+1 19	+1 20	+4.2	+0.4	1.49

*As the tide is chiefly diurnal at these stations, the differences should be applied to only the higher high and lower low waters at Port Townsend.

†The time of slack water at Seymour Narrows is given in Table 9 of this volume.

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	4 50	10 50	6 31a	10 44b	5.6	6.7	4.4	10.8	1.1	8.2	.....	8.2	5.6	6.4	24.0
2	4 30	10 40	6 14a	10 34b	5.4	6.5	4.2	10.0	1.1	8.1	.....	8.1	5.5	6.3	24.0
3	4 35	10 30	6 19a	10 24b	5.1	6.2	4.0	9.6	1.0	7.9	.....	8.0	5.1	6.0	24.0
4	4 45	10 28	6 30a	10 22b	5.0	6.0	3.9	9.4	1.0	7.8	.....	7.9	5.0	5.9	24.0
5	4 47	10 30	6 32a	10 24b	5.0	6.0	3.9	9.4	1.0	7.8	.....	7.9	5.0	5.9	24.0
6	4 50	10 33	6 35a	10 27b	5.2	6.2	4.1	9.7	1.0	7.9	.....	7.9	5.3	6.2	24.0
7	4 53	10 45	6 37a	10 39b	5.3	6.4	4.1	9.9	1.1	8.0	.....	8.0	5.4	6.3	24.0
8	4 56	10 58	6 37b	10 52b	5.6	6.7	4.4	10.3	1.1	8.2	.....	8.2	5.6	6.5	24.0
9	4 59	11 10	6 37b	11 04b	5.7	6.8	4.5	9.6	1.1	7.8	.....	7.8	5.1	6.0	24.0
10	3 28	9 22	5 16b	9 15b	5.0	6.0	3.9	9.4	1.0	7.8	.....	7.8	5.2	6.0	24.0
11	3 43	9 48	5 26b	9 42b	5.5	6.6	4.3	10.1	1.1	8.1	.....	8.2	5.6	6.4	24.0
12	3 30	9 30	5 15b	9 24b	5.2	6.2	4.1	9.7	1.0	7.9	.....	7.9	5.3	6.2	24.0
13	3 35	9 36	5 19b	9 30b	5.4	6.5	4.2	10.0	1.1	8.1	.....	8.1	5.5	6.3	24.0
14	3 51	9 56	5 32b	9 50b	5.7	6.8	4.5	10.4	1.1	8.3	.....	8.3	5.7	6.6	24.0
15	4 17	10 28	5 58b	10 17b	5.7	6.8	4.5	10.4	1.1	8.3	.....	8.3	5.7	6.6	24.0
16	[2 00]	[8 14]	0 01b	8 46b	[2.7]	[3.4]	[2.0]	6.8	.....	.....	.....	6.8	3.6	4.6	24.5
17	[2 17]	[8 31]	—0 10b	8 50b	[2.6]	[3.2]	[1.9]	7.4	.....	.....	9 18	6.7	3.3	4.5	24.5
18	[2 27]	[8 41]	1 44b	8 49b	[2.4]	[3.0]	[1.8]	6.5	.....	.....	.....	6.6	3.4	4.4	24.0
19	5 05	11 15	6 43b	11 09b	5.9	7.0	4.6	10.7	1.1	8.0	.....	8.0	5.7	6.7	24.0
20	5 04	11 15	6 42b	11 09b	5.9	7.0	4.6	10.7	1.1	8.0	.....	8.0	5.7	6.7	24.5
21	5 10	11 22	6 48b	11 16b	5.9	7.0	4.6	10.7	1.1	8.0	.....	8.0	5.7	6.7	24.5
22	5 30	11 45	7 05b	11 39b	6.4	7.6	5.0	11.4	1.2	8.4	.....	8.4	6.1	7.1	25.0
23	5 11	11 23	6 45b	11 15b	6.0	7.0	4.4	10.4	1.2	7.5	.....	7.6	5.6	6.9	25.0
24	5 20	11 35	6 49b	11 28b	6.7	7.8	4.9	11.3	1.2	7.9	.....	8.0	6.1	7.2	25.0
25	5 28	12 01	6 56b	11 53b	6.8	8.2	5.0	11.9	1.1	8.2	12 00	8.3	6.2	7.3	25.0
26	5 38	11 58	7 01b	11 51b	7.7	9.0	5.6	12.6	1.3	8.5	.....	8.6	6.8	8.0	25.5
27	5 50	12 20	7 09b	12 14b	8.4	9.8	6.1	13.5	1.3	8.9	.....	9.0	7.3	8.6	25.5
28	4 40	11 05	5 59b	10 59b	8.4	9.8	6.1	13.5	1.3	8.9	.....	9.0	7.3	8.6	25.5
29	4 52	11 18	6 10b	11 12b	8.7	10.2	6.4	13.9	1.4	9.0	.....	9.1	7.5	8.8	25.5
30	5 00	11 15	6 18b	11 00b	8.6	10.1	6.3	13.8	1.4	9.0	.....	9.1	7.4	8.7	25.5
31	4 45	11 00	6 00b	10 54b	9.1	10.6	6.6	14.4	1.4	9.2	.....	9.3	7.7	9.0	25.5
32	5 40	12 00	6 54b	11 52b	9.6	11.2	7.0	15.0	1.4	9.5	.....	9.6	8.1	9.5	26.0
33	5 45	12 00	7 00b	11 54b	10.1	11.8	7.4	15.7	1.5	9.7	.....	9.8	8.4	9.8	26.0
34	6 50	1 00	8 10b	1 03a	10.1	11.8	7.4	15.7	1.5	9.7	.....	9.8	8.4	9.8	26.0
35	5 42	12 13	6 54b	12 07b	10.1	11.8	7.4	15.7	1.5	9.7	.....	9.8	8.4	9.8	26.0
36	6 55	1 10	8 07b	1 04a	10.1	11.8	7.4	15.7	1.5	9.7	.....	9.8	8.4	9.8	26.0
37	4 45	10 15	6 22b	11 09b	6.1	7.2	4.8	10.9	1.1	8.5	.....	8.6	6.0	6.9	26.0
38	2 39	8 05	1 14b	8 26b	6.8	8.0	5.5	12.3	2.5	8.9	9 43	9.3	6.5	7.4	26.0
39	2 50	8 20	6 40b	8 32b	11.4	15.7	8.6	15.8	1.8	5.3	.....	5.9	7.6	7.5	26.5
40	3 40	10 00	3 11b	10 11b	12.5	15.7	7.7	15.9	1.9	5.5	.....	6.0	8.2	8.0	26.5
41	3 30	9 48	3 00b	10 00b	11.0	14.1	7.4	14.4	1.9	5.4	.....	5.9	7.4	7.7	26.5
42	3 00	9 20	2 31b	9 31b	11.5	14.7	7.7	14.9	1.9	5.5	.....	6.0	7.7	8.0	26.5
43	3 00	9 20	2 31b	9 31b	11.5	14.7	7.7	14.9	1.9	5.5	.....	6.0	7.7	8.0	26.5
44	2 30	8 47	2 02b	8 58b	12.5	16.0	8.3	15.9	2.0	5.7	.....	6.3	8.2	8.6	26.5
45	1 55	8 10	1 25b	8 22b	11.0	14.1	7.4	14.4	1.9	5.4	.....	5.9	7.4	7.7	26.5
46	1 45	8 00	1 14b	8 12b	10.6	13.6	7.1	13.9	1.8	5.3	.....	5.8	7.2	7.5	26.5
47	1 15	7 29	0 46b	7 40b	11.9	15.2	8.0	15.4	2.0	5.6	.....	6.1	7.9	8.2	26.5
48	1 08	7 22	0 39b	7 33b	11.5	14.7	7.7	14.9	1.9	5.5	.....	6.0	7.7	8.0	26.5
49	1 00	7 13	0 31b	7 24b	11.5	14.7	7.7	14.9	1.9	5.5	.....	6.0	7.7	8.0	26.5
50	1 00	7 13	0 31b	7 24b	11.5	14.7	7.7	14.9	1.9	5.5	.....	6.0	7.7	8.0	26.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (WEST COAST)—Continued.										
	BRITISH COLUMBIA—continued.	North.	West.				Time meridian, 120° W.		Mean Lower Low Water.		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Deep Harbor, Fife Sound	50 48	126 35	8 26	Sitka	169	+1 38	+1 39	+3.7	+0.3	1.42
2	Tracey Harbor, Broughton Island	50 51	126 53	8 28	Sitka	169	+1 20	+1 21	+3.3	+0.3	1.37
3	Cypress Harbor, Broughton Island	50 50	126 41	8 27	Sitka	169	+1 49	+1 50	+2.9	+0.3	1.33
4	Beaver Cove, Vancouver Island	50 33	126 52	8 27	Sitka	169	+1 29	+1 30	+2.5	+0.3	1.29
5	Alert Bay, Cormorant Island	50 35	126 57	8 28	Sitka	169	+1 15	+1 16	+2.5	+0.3	1.29
6	Nimpkish River, Vancouver Island	50 34	126 50	8 28	Sitka	169	+1 20	+1 21	+1.9	+0.1	1.22
7	Beaver Harbor, Vancouver Island	50 43	127 25	8 30	Sitka	169	+0 52	+0 52	+1.5	+0.1	1.16
8	Blunden Harbor	50 54	127 19	8 29	Sitka	169	+0 51	+0 51	+1.5	+0.1	1.16
9	Port Alexander, Galiano Island	50 51	127 40	8 31	Sitka	169	+0 55	+0 55	+1.5	+0.1	1.18
10	Bull Harbor, Hope Island	50 55	127 56	8 32	Sitka	169	+0 34	+0 34	+0.7	+0.1	1.09
	Vancouver Island, southwest coast.										
11	Race Rocks Light, Fuca Strait	48 18	123 32	8 14	Port Townsend	165	−1 59	−1 51	−2.5	−2.2	0.94
12	Sooke Inlet, Fuca Strait	48 21	123 43	8 15	Port Townsend	165	−2 16	−1 59	−2.3	−2.2	0.98
13	Jordan River, Fuca Strait	48 25	124 03	8 16	Port Townsend	165	−2 32	−2 12	−1.7	−2.0	1.06
14	Port San Juan, Fuca Strait	48 33	124 26	8 18	Astoria	161	+0 33	+0 16	−0.5	−0.1	0.94
15	Carmanah Point Light	48 37	124 46	8 19	Astoria	161	+0 09	−0 10	−0.5	−0.1	0.94
16	Cape Beale Light, Barclay Sound	48 48	125 14	8 21	Astoria	161	−0 14	−0 21	+1.7	+0.1	1.25
17	Stamp Harbor	49 16	124 51	8 19	Astoria	161	+0 34	+0 42	+3.8	+0.2	1.56
18	Clayoquot Sound	49 14	126 00	8 24	Astoria	161	−0 16	−0 25	+1.7	0.0	1.27
19	Hesquiat Harbor	49 25	126 28	8 26	Astoria	161	−0 24	−0 35	+1.9	0.0	1.30
20	Nootka Sound	49 36	126 38	8 27	Astoria	161	−0 23	−0 35	+1.5	0.0	1.23
21	Esperanza Inlet	49 50	126 58	8 28	Astoria	161	−0 32	−0 44	+1.5	+0.1	1.22
22	Kyuquot Sound	50 00	127 12	8 29	Astoria	161	−0 36	−0 50	+1.1	0.0	1.17
23	Ou-Ou-Kinsh Inlet	50 08	127 34	8 30	Astoria	161	−0 38	−0 53	+1.1	0.0	1.17
24	Klaskino Inlet	50 18	127 52	8 31	Astoria	161	−0 48	−1 03	+0.5	0.0	1.08
25	Quatsino Sound Entrance	50 28	127 56	8 32	Astoria	161	−0 47	−1 02	+0.5	0.0	1.08
	Smith Inlet.						Time meridian, 135° W.				
26	Takush Harbor	51 17	127 39	8 31	Sitka	169	−0 12	−0 12	+1.7	+0.1	1.19
	Fitzhugh Sound.										
27	Schooner Retreat	51 28	127 45	8 31	Sitka	169	−0 07	−0 07	+1.5	+0.1	1.16
28	Safety Cove	51 32	127 56	8 32	Sitka	169	−0 01	−0 01	+2.0	+0.2	1.23
29	Goldstream Harbor	51 43	128 01	8 32	Sitka	169	−0 11	−0 11	+2.5	+0.3	1.29
30	Namu Harbor	51 52	127 52	8 31	Sitka	169	+0 02	+0 02	+2.2	+0.2	1.25
31	Welcome Harbor, Hakai Strait	51 41	128 08	8 33	Sitka	169	−0 15	−0 15	+1.5	+0.1	1.16
	Fisher Channel.										
32	Port John	52 00	127 58	8 32	Sitka	169	+0 34	+0 38	+3.1	+0.3	1.36
	Campbell Island.										
33	McLaughlin Bay	52 09	128 10	8 33	Sitka	169	+0 15	+0 19	+1.7	+0.1	1.19
34	Kynumpt Harbor	52 12	128 13	8 33	Sitka	169	+0 10	+0 12	+2.2	+0.2	1.25
	Milbank Sound.										
35	Port Blakeney	52 19	128 23	8 34	Sitka	169	−0 14	−0 15	+1.5	+0.1	1.18
	Finlayson Channel.										
36	Nowish Cove	52 31	128 27	8 34	Sitka	169	+0 06	+0 05	+1.8	+0.3	1.20
37	Klemtoo Passage	52 34	128 32	8 34	Sitka	169	+0 09	+0 08	+1.8	+0.3	1.20
	Queen Charlotte Islands.										
38	Port Kuper	52 57	132 16	8 49	Sitka	169	0 18	−0 18	+1.5	+0.1	1.16
39	Skidegate Inlet	53 13	131 59	8 48	Sitka	169	−0 11	−0 11	+2.5	+0.3	1.29
	Principe Channel.										
40	Port Stephens	53 21	129 41	8 39	Sitka	169	−0 07	−0 08	+3.7	+0.3	1.42
41	Port Canaveral	53 34	130 09	8 41	Sitka	169	−0 02	−0 03	+3.7	+0.3	1.42
	Wright Sound.										
42	Holmes Bay	53 16	129 05	8 36	Sitka	169	−0 12	−0 13	+2.5	+0.3	1.29
43	Coghlan Anchorage	53 23	129 17	8 37	Sitka	169	−0 11	−0 12	+3.7	+0.3	1.42
	Grenville Channel.										
44	Lowe Inlet	53 33	129 36	8 38	Sitka	169	0 00	0 00	+4.7	+0.5	1.55
45	Klewnugget Inlet	53 39	129 45	8 39	Sitka	169	+0 11	+0 12	+4.7	+0.5	1.55

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	1 20	7 33	0 50b	7 45b	11.0	14.1	7.4	14.3	1.9	5.4	.....	5.9	7.4	7.8	27.0
2	1 00	7 13	0 29b	7 25b	10.6	13.6	7.1	13.8	1.9	5.3	.....	5.8	7.2	7.6	27.0
3	1 30	7 43	0 59b	7 55b	10.3	13.2	6.9	13.5	1.8	5.2	.....	5.7	7.0	7.4	27.0
4	1 10	7 23	0 39b	7 35b	10.0	12.8	6.7	13.1	1.8	5.1	.....	5.6	6.8	7.2	26.5
5	0 55	7 08	0 24b	7 20b	10.0	12.8	6.7	13.1	1.8	5.1	.....	5.6	6.8	7.2	26.5
6	1 00	7 13	0 27b	7 26b	9.4	12.1	6.3	12.5	1.8	5.0	.....	5.5	6.4	6.9	26.5
7	0 30	6 42	— 0 03b	6 45b	9.0	11.5	6.0	12.0	1.7	4.9	.....	5.3	6.2	6.6	26.5
8	0 30	6 42	— 0 03b	6 45b	9.0	11.5	6.0	12.0	1.7	4.9	.....	5.3	6.2	6.6	27.0
9	0 32	6 44	— 0 01b	6 47b	9.1	11.6	6.1	12.1	1.7	4.9	.....	5.4	6.2	6.7	27.0
10	0 10	6 22	— 0 25b	6 36b	8.4	10.7	5.6	11.3	1.7	4.7	.....	5.2	5.8	6.2	27.0
11	1 45	7 38	3 34b	7 32b	4.8	5.8	3.7	9.1	1.0	7.6	.....	7.6	5.0	5.8	25.0
12	1 27	7 29	8 15b	7 23b	5.0	6.0	3.9	9.4	1.0	7.8	.....	7.8	5.2	6.0	25.0
13	1 10	7 15	2 54b	7 09b	5.4	6.5	4.2	10.0	1.1	8.1	.....	8.1	5.5	6.3	25.0
14	0 45	6 55	0 10b	7 12b	6.0	7.4	4.3	8.5	1.9	3.6	.....	4.1	4.3	4.6	25.0
15	0 20	6 28	— 0 15b	6 45b	6.0	7.4	4.3	8.5	1.9	3.6	.....	4.1	4.3	4.6	25.0
16	12 20	6 15	11 49a	6 30b	8.0	9.9	5.7	10.9	2.2	4.2	.....	4.7	5.5	5.9	25.0
17	0 45	7 20	0 17b	7 33b	10.0	12.4	7.1	13.2	2.4	4.6	.....	5.3	6.6	7.1	25.5
18	12 15	6 08	11 44a	6 23b	8.1	10.0	5.8	11.0	2.2	4.2	.....	4.8	5.5	5.9	25.5
19	12 05	5 56	11 35a	6 10b	8.3	10.3	5.9	11.2	2.2	4.2	.....	4.8	5.6	6.1	25.5
20	12 05	5 55	11 34a	6 10b	7.9	9.8	5.6	10.7	2.1	4.1	.....	4.7	5.4	5.9	26.0
21	11 55	5 45	11 24a	6 00b	7.8	9.7	5.5	10.6	2.1	4.1	.....	4.7	5.4	5.7	26.0
22	11 50	5 38	11 18a	5 53b	7.5	9.3	5.3	10.2	2.1	4.0	.....	4.6	5.2	5.6	26.0
23	11 47	5 34	11 15a	5 49b	7.5	9.3	5.3	10.2	2.1	4.0	.....	4.6	5.2	5.6	26.0
24	11 35	5 22	11 02a	5 38b	6.9	8.6	4.9	9.6	2.0	3.9	.....	4.4	4.8	5.2	26.5
25	11 35	5 22	11 02a	5 38b	6.9	8.6	4.9	9.6	2.0	3.9	.....	4.4	4.8	5.2	26.5
26	0 25	6 37	— 0 08b	6 50b	9.2	11.8	6.2	12.2	1.7	4.9	.....	5.4	6.3	6.7	27.0
27	0 30	6 42	— 0 03b	6 55b	9.0	11.5	6.0	12.0	1.7	4.9	.....	5.3	6.2	6.6	27.0
28	0 35	6 47	0 03b	7 00b	9.5	12.2	6.4	12.6	1.8	5.0	.....	5.5	6.5	6.9	27.0
29	0 25	6 37	— 0 06b	6 49b	10.0	12.8	6.7	13.1	1.8	5.1	.....	5.6	6.8	7.2	27.5
30	0 39	6 51	0 07b	7 04b	9.7	12.4	6.5	12.8	1.8	5.1	.....	5.5	6.6	7.0	27.5
31	0 20	6 32	— 0 13b	6 45b	9.0	11.5	6.0	12.0	1.7	4.9	.....	5.3	6.2	6.6	27.5
32	1 10	7 26	0 39b	7 38b	10.5	13.4	7.0	13.7	1.9	5.3	.....	5.8	7.1	7.5	27.5
33	0 50	7 06	0 17b	7 19b	9.2	11.8	6.2	12.2	1.7	4.9	.....	5.4	6.3	6.7	27.5
34	0 45	6 59	0 13b	7 12b	9.7	12.4	6.5	12.8	1.8	5.1	.....	5.5	6.6	7.0	27.5
35	0 20	6 31	— 0 13b	6 44b	9.1	11.6	6.1	12.1	1.7	4.9	.....	5.4	6.2	6.7	27.5
36	0 40	6 52	0 08b	7 05b	9.3	11.9	6.2	12.3	1.7	5.0	.....	5.4	6.4	6.8	27.5
37	0 43	6 55	0 11b	7 08b	9.3	11.9	6.2	12.3	1.7	5.0	.....	5.4	6.4	6.8	27.5
38	0 00	6 12	— 0 33b	6 25b	9.0	11.5	6.1	12.0	1.7	4.9	.....	5.3	6.2	6.6	27.5
39	0 07	6 19	— 0 24b	6 31b	10.0	12.8	6.7	13.1	1.8	5.1	.....	5.6	6.8	7.2	27.5
40	0 22	6 33	— 0 08b	6 45b	11.0	14.1	7.4	14.3	1.9	5.4	.....	5.9	7.4	7.8	28.0
41	0 25	6 36	— 0 05b	6 48b	11.0	14.1	7.4	14.3	1.9	5.4	.....	5.9	7.4	7.8	28.0
42	0 20	6 31	— 0 11b	6 43b	10.0	12.8	6.7	13.1	1.8	5.1	.....	5.6	6.8	7.2	28.0
43	0 20	6 30	— 0 10b	6 42b	11.0	14.1	7.4	14.3	1.9	5.4	.....	5.9	7.4	7.8	28.0
44	0 30	6 42	0 01b	6 53b	12.0	15.4	8.0	15.4	2.0	5.6	.....	6.2	8.0	8.4	28.5
45	0 40	6 53	0 11b	7 04b	12.0	15.4	8.0	15.4	2.0	5.6	.....	6.2	8.0	8.4	28.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (WEST COAST)—Continued.										
	BRITISH COLUMBIA—continued.	North.	West.				Time meridian, 135° W.		Mean Lower Low Water.		
	Ogden Channel.	° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Alpha Bay	53 52	130 18	8 41	Sitka	169	−0 07	−0 09	+ 6.8	+0.5	1.75
	Chatham Sound.										
2	Refuge Bay, Porcher Island	54 04	130 22	8 41	Sitka	169	−0 12	−0 14	+ 4.6	+0.4	1.54
3	Qlawdzeet Anchorage	54 13	130 46	8 43	Sitka	169	−0 15	−0 17	+ 4.1	+0.3	1.49
4	Metlakahtla Bay	54 20	130 28	8 42	Sitka	169	−0 08	−0 10	+ 6.5	+0.5	1.77
5	Port Simpson	54 34	130 27	8 42	Sitka	169	−0 12	−0 13	+ 6.3	+0.7	1.73
	BRITISH COLUMBIA AND ALASKA.										
	Portland Canal, etc.										
6	Wales Point, B. C	54 42	130 28	8 42	Sitka	169	−0 14	−0 16	+ 5.5	+0.5	1.66
7	Winter Har., Pearse Canal, B. C	54 49	130 27	8 42	Sitka	169	−0 08	−0 16	+ 5.9	+0.5	1.68
8	Somerville Bay, B. C	54 47	130 13	8 41	Sitka	169	−0 10	−0 12	+ 6.1	+0.5	1.71
9	Nass Bay, B. C	54 59	129 59	8 40	Sitka	169	+0 13	+0 10	+11.1	+0.9	2.32
10	Observatory Inlet, B. C	55 06	129 58	8 40	Sitka	169	+0 16	+0 12	+11.1	+0.9	2.32
11	Halibut Bay, Alaska	55 14	130 06	8 40	Sitka	169	+0 18	+0 14	+ 7.7	+0.9	1.88
12	Fords Cove, B. C	55 37	130 06	8 40	Sitka	169	+0 21	+0 16	+ 8.1	+1.0	1.92
	ALASKA.										
	Dixon Entrance.										
13	Haystack Island	54 43	130 37	8 42	Sitka	169	−0 15	−0 17	+ 5.7	+0.5	1.67
14	Port Tongass, Tongass Island	54 46	130 44	8 43	Sitka	169	−0 17	−0 22	+ 5.9	+0.5	1.70
15	Nakat Harbor	54 48	130 42	8 43	Sitka	169	−0 13	−0 22	+ 5.9	+0.5	1.68
16	Cape Fox	54 46	130 51	8 43	Sitka	169	−0 18	−0 17	+ 5.7	+0.5	1.67
17	Cape Chacon, Prince of Wales Id	54 42	132 01	8 48	Sitka	169	−0 15	−0 12	+ 3.7	+0.3	1.44
18	Howkan, Kaigahnee Strait	54 49	132 49	8 51	Sitka	169	+0 09	+0 16	+ 4.7	+0.5	1.55
19	Cape Muzon, Dall Island	54 40	132 41	8 51	Sitka	169	−0 14	−0 13	+ 3.5	+0.3	1.40
	Revillagigedo Channel.										
20	Morse Cove, Duke Island	54 55	131 15	8 45	Sitka	169	+0 04	+0 01	+ 5.9	+0.5	1.68
21	Vixen Bay, Boca de Quadra	55 03	130 47	8 43	Sitka	169	+0 10	+0 04	+ 4.9	+0.5	1.58
22	Custom House Cove, Mary Island	55 06	131 13	8 45	Sitka	169	−0 01	−0 13	+ 6.1	+0.5	1.71
23	Hassler Harbor, Annette Island	55 13	131 26	8 46	Sitka	169	+0 04	−0 06	+ 6.3	+0.5	1.74
24	Gnat Harbor, Carroll Inlet	55 23	131 20	8 45	Sitka	169	+0 12	−0 12	+ 4.8	+0.4	1.57
25	Ward Cove, Tongass Narrows	55 24	131 44	8 47	Sitka	169	+0 08	+0 05	+ 8.5	+0.7	2.02
26	Ketchikan, Tongass Narrows	55 21	131 39	8 47	Sitka	169	+0 05	+0 06	+ 5.7	+0.5	1.67
	Behm Canal.										
27	Shoalwater Pass	55 26	130 54	8 44	Sitka	169	+0 01	−0 09	+ 4.8	+0.4	1.57
28	Burroughs Bay	56 02	131 06	8 44	Sitka	169	−0 05	−0 11	+ 5.3	−0.4	1.74
29	Bell Arm, Bell Island	55 58	131 31	8 46	Sitka	169	−0 01	−0 05	+ 8.5	+0.7	2.02
30	Convenient Cove, Hassler Island	55 52	131 41	8 47	Sitka	169	−0 07	−0 08	+ 4.4	+0.4	1.52
31	Yes Bay	55 56	131 50	8 47	Sitka	169	−0 06	−0 05	+ 5.4	−0.4	1.75
32	Loring, Naha Bay	55 36	131 38	8 47	Sitka	169	−0 11	−0 12	+ 5.3	−0.4	1.74
	Clarence Strait.										
33	Cape Northumberland, Duke Id	54 51	131 22	8 46	Sitka	169	−0 15	−0 14	+ 4.4	+0.4	1.52
34	Tamgas Harbor, Annette Island	55 04	131 38	8 46	Sitka	169	−0 13	−0 16	+ 6.1	+0.5	1.71
35	Niblack Anchorage, Moira Sound	55 04	132 07	8 48	Sitka	169	−0 10	−0 13	+ 6.3	+0.5	1.75
36	Metlakatla, Port Chester	55 08	131 34	8 46	Sitka	169	−0 08	−0 11	+ 6.3	+0.5	1.74
37	Chasima Anch., Cholmondeley Sd	55 16	132 03	8 48	Sitka	169	−0 02	−0 05	+ 6.7	+0.5	1.79
38	Kasaan Bay Entrance	55 24	132 10	8 49	Sitka	169	+0 06	+0 05	+ 7.3	+0.7	1.87
39	Kasaan Village, Skowl Arm	55 23	132 22	8 49	Sitka	169	+0 12	+0 11	+ 5.9	+0.7	1.68
40	Karta Bay, Kasaan Bay	55 34	132 35	8 50	Sitka	169	+0 07	+0 06	+ 5.9	0.0	1.77
41	Tolstoi Bay, Prince of Wales Island	55 39	132 25	8 50	Sitka	169	+0 11	+0 09	+ 6.1	+0.5	1.72
42	Union Bay, Earnest Sound	55 45	132 12	8 49	Sitka	169	+0 12	+0 11	+ 5.5	+0.5	1.66
43	Dewey Anchorage, Etolin Island	55 55	132 22	8 49	Sitka	169	+0 13	+0 12	+ 6.5	+0.5	1.77
44	Ratz Harbor, Prince of Wales Island	55 53	132 36	8 50	Sitka	169	+0 13	+0 12	+ 6.1	+0.5	1.71
45	Steamer Bay, Etolin Island	56 09	132 41	8 51	Sitka	169	+0 09	+0 08	+ 5.9	+0.5	1.68
	Sumner Strait.										
46	Port McArthur, Kuiu Island	56 04	134 07	8 56	Sitka	169	−0 04	−0 03	+ 0.7	+0.1	1.09
47	Shakan, Prince of Wales Island	56 08	133 27	8 54	Sitka	169	+0 01	0 00	+ 1.9	+0.1	1.22
48	Port Beauclerc, Kuiu Island	56 18	133 54	8 56	Sitka	169	0 00	−0 01	+ 3.7	+0.3	1.41
49	Port Protection, Prince of Wales Id	56 19	133 36	8 54	Sitka	169	0 00	−0 02	+ 2.9	+0.4	1.35
50	Red Bay, Prince of Wales Island	56 19	133 18	8 53	Sitka	169	+0 03	0 00	+ 4.9	+0.5	1.58
51	Duncan Canal Entrance	56 32	133 05	8 52	Sitka	169	+0 08	+0 05	+ 5.3	+0.5	1.62
52	St. John Harbor, Zarembo Island	56 26	132 57	8 52	Sitka	169	+0 07	+0 04	+ 5.7	+0.5	1.67
53	Wrangell, Wrangell Island	56 28	132 22	8 49	Sitka	169	+0 12	+0 09	+ 6.7	+0.5	1.79
54	Highfield Cannery	56 29	132 22	8 49	Sitka	169	+0 14	+0 11	+ 6.3	+0.5	1.75
55	Stikine River Ent., Pt. Rothsay	56 35	132 22	8 49	Sitka	169	+0 25	+0 30	+ 4.1	+0.3	1.48

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*East.* °
1	0 20	6 30	−0 07*b*	6 41*b*	13.5	17.3	9.1	17.2	2.1	6.0	.....	6.5	8.8	9.3	28.5
2	0 15	6 25	−0 14*b*	6 36*b*	11.9	15.3	8.0	15.3	2.0	5.6	.....	6.1	7.9	8.4	28.5
3	0 10	6 20	−0 19*b*	6 31*b*	11.5	14.7	7.7	14.8	1.9	5.5	.....	6.0	7.6	8.1	29.0
4	0 18	6 28	−0 09*b*	6 39*b*	13.7	17.5	9.2	17.4	2.1	6.0	.....	6.6	8.9	9.4	29.0
5	0 14	6 25	−0 13*b*	6 36*b*	13.4	17.2	9.0	17.0	2.1	5.9	.....	6.5	8.8	9.2	29.0
6	0 11	6 21	−0 17*b*	6 32*b*	12.8	16.4	8.6	16.3	2.0	5.8	.....	6.4	8.4	8.9	29.0
7	0 17	6 21	−0 10*b*	6 32*b*	13.0	16.6	8.7	16.6	2.1	5.9	.....	6.4	8.6	9.0	29.0
8	0 16	6 26	−0 11*b*	6 37*b*	13.2	16.9	8.8	16.8	2.1	5.9	.....	6.5	8.7	9.1	29.0
9	0 40	6 49	0 16*b*	6 58*b*	17.9	22.9	12.0	22.1	2.4	6.9	.....	7.5	11.4	12.0	29.5
10	0 43	6 51	0 19*b*	7 00*b*	17.9	22.9	12.0	22.1	2.4	6.9	.....	7.5	11.4	12.0	29.5
11	0 45	6 53	0 19*b*	7 03*b*	14.5	18.8	10.1	19.6	2.2	6.4	.....	6.8	9.7	10.4	29.5
12	0 48	6 56	0 21*b*	7 06*b*	14.8	19.2	10.4	19.9	2.3	6.5	.....	6.9	9.9	10.6	30.0
13	0 10	6 20	−0 18*b*	6 31*b*	12.9	16.5	8.6	16.5	2.0	5.9	.....	6.4	8.5	8.9	29.0
14	0 08	6 15	−0 19*b*	6 26*b*	13.1	16.8	8.8	16.7	2.1	5.9	.....	6.4	8.6	9.1	29.0
15	0 12	6 15	−0 15*b*	6 26*b*	13.0	16.6	8.7	16.6	2.1	5.9	.....	6.4	8.6	9.0	29.0
16	0 07	6 20	−0 21*b*	6 31*b*	12.9	16.5	8.6	16.5	2.0	5.9	.....	6.4	8.5	8.9	29.0
17	0 04	6 19	−0 26*b*	6 31*b*	11.1	14.2	7.4	14.4	1.9	5.4	.....	5.9	7.4	7.9	29.0
18	0 25	6 44	−0 04*b*	6 55*b*	12.0	15.4	8.0	15.4	2.0	5.6	.....	6.2	8.0	8.4	29.0
19	0 02	6 15	−0 29*b*	6 27*b*	10.8	13.8	7.2	14.1	1.9	5.4	.....	5.9	7.8	7.7	29.0
20	0 27	6 36	0 00*b*	6 47*b*	13.0	16.6	8.7	16.6	2.1	5.9	.....	6.4	8.6	9.0	29.0
21	0 35	6 41	0 06*b*	6 52*b*	12.2	15.6	8.2	15.7	2.0	5.7	.....	6.2	8.1	8.6	29.5
22	0 22	6 22	−0 05*b*	6 33*b*	13.2	16.9	8.8	16.8	2.1	5.9	.....	6.5	8.7	9.1	29.5
23	0 25	6 27	−0 02*b*	6 38*b*	13.4	17.2	9.0	17.0	2.1	6.0	.....	6.5	8.8	9.3	29.5
24	0 35	6 23	0 06*b*	6 34*b*	12.1	15.5	8.1	15.6	2.0	5.7	.....	6.2	8.0	8.5	29.5
25	0 28	6 37	0 03*b*	6 47*b*	15.6	20.0	10.5	19.5	2.3	6.4	.....	7.0	10.0	10.6	29.5
26	0 25	6 38	0 02*b*	6 38*b*	12.9	16.5	8.6	16.5	2.0	5.9	.....	6.4	8.9	9.3	29.5
27	0 25	6 27	−0 04*b*	6 38*b*	12.1	15.5	8.1	15.6	2.0	5.7	.....	6.2	8.0	8.5	29.5
28	0 19	6 25	0 01*b*	6 41*b*	13.4	16.6	9.2	17.4	2.3	5.6	.....	6.1	8.2	9.5	30.0
29	0 20	6 28	0 02*b*	6 30*b*	15.6	20.0	10.5	19.5	2.3	6.4	.....	7.0	10.0	10.6	30.0
30	0 13	6 24	−0 02*b*	6 26*b*	11.7	15.0	7.8	15.1	1.9	5.6	.....	6.1	7.8	8.2	30.0
31	0 15	6 27	−0 04*b*	6 29*b*	13.5	16.8	9.1	17.2	2.2	5.2	.....	5.6	8.2	9.3	30.0
32	0 10	6 20	−0 09*b*	6 22*b*	13.4	16.6	9.2	17.4	2.3	5.6	.....	6.1	8.2	9.5	30.0
33	0 06	6 19	−0 23*b*	6 30*b*	11.7	15.0	7.8	15.1	1.9	5.6	.....	6.1	7.8	8.2	29.0
34	0 08	6 17	−0 19*b*	6 28*b*	13.2	16.9	8.8	16.8	2.1	5.9	.....	6.5	8.7	9.1	29.5
35	0 09	6 18	−0 16*b*	6 29*b*	13.5	17.3	9.0	17.1	2.1	6.0	.....	6.5	8.8	9.4	29.5
36	0 13	6 22	−0 14*b*	6 33*b*	13.4	17.2	9.0	17.0	2.1	6.0	.....	6.5	8.8	9.3	29.5
37	0 17	6 26	−0 10*b*	6 37*b*	13.8	17.7	9.2	17.4	2.1	6.0	.....	6.6	9.0	9.5	29.5
38	0 25	6 35	−0 01*b*	6 45*b*	14.4	18.4	9.6	18.2	2.2	6.2	.....	6.7	9.4	9.9	29.5
39	0 30	6 41	0 03*b*	6 52*b*	13.0	16.6	8.7	16.6	2.1	5.9	.....	6.4	8.6	9.0	29.5
40	0 25	6 35	−0 01*b*	6 45*b*	13.6	17.3	9.0	18.0	2.1	5.9	.....	6.5	8.4	9.0	29.5
41	0 28	6 38	0 01*b*	6 49*b*	13.3	17.0	8.9	16.9	2.1	5.9	.....	6.5	8.7	9.1	29.5
42	0 30	6 41	0 02*b*	6 52*b*	12.8	16.4	8.6	16.3	2.0	5.8	.....	6.4	8.4	8.9	30.0
43	0 31	6 42	0 04*b*	6 53*b*	13.7	17.5	9.2	17.3	2.1	6.0	.....	6.6	8.9	9.4	30.0
44	0 30	6 41	0 02*b*	6 52*b*	13.2	16.9	8.8	16.8	2.1	5.9	.....	6.5	8.7	9.1	30.0
45	0 25	6 36	−0 02*b*	6 47*b*	13.0	16.6	8.7	16.6	2.1	5.9	.....	6.4	8.6	9.0	30.0
46	0 07	6 20	−0 28*b*	6 34*b*	8.4	10.8	5.6	11.3	1.7	4.7	.....	5.2	5.8	6.2	29.5
47	0 12	6 23	−0 21*b*	6 36*b*	9.4	12.0	6.3	12.4	1.7	5.0	.....	5.5	6.4	6.9	30.0
48	0 11	6 22	−0 19*b*	6 34*b*	10.9	14.0	7.3	14.2	1.9	5.4	.....	5.9	7.3	7.7	30.0
49	0 13	6 23	−0 18*b*	6 35*b*	10.4	13.3	7.0	13.6	1.8	5.2	.....	5.7	7.0	7.2	30.0
50	0 17	6 26	−0 12*b*	6 37*b*	12.2	15.6	8.2	15.7	2.0	5.7	.....	6.2	8.1	8.6	30.0
51	0 23	6 32	−0 05*b*	6 43*b*	12.5	16.0	8.4	16.0	2.0	5.8	.....	6.3	8.3	8.7	30.0
52	0 22	6 31	−0 04*b*	6 42*b*	12.9	16.5	8.6	16.5	2.0	5.9	.....	6.4	8.5	8.9	30.0
53	0 30	6 39	0 03*b*	6 50*b*	13.8	17.7	9.2	17.4	2.1	6.0	.....	6.6	9.0	9.5	30.0
54	0 32	6 41	0 05*b*	6 52*b*	13.5	17.3	9.0	17.1	2.1	6.0	.....	6.5	8.8	9.4	30.0
55	0 45	7 00	0 15*b*	7 12*b*	11.4	14.6	7.6	14.7	1.9	5.5	.....	6.0	7.6	8.1	30.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (WEST COAST)—Continued.										
	ALASKA—continued.										
	Wrangell Strait.	*North.*	*West.*				*Time meridian, 135° W.*		*3 feet below Mean Lower Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Point Lockwood, Woewodski Island	56 33	132 57	8 52	Sitka	169	+0 10	+0 08	+ 8.3	+2.8	1.71
2	Finger Point, Lindenberg Penin	56 41	132 56	8 52	Sitka	169	+0 35	+0 35	+ 9.2	+2.8	1.83
3	Prolewy Point, Lindenberg Penin	56 50	132 56	8 52	Sitka	169	+0 15	+0 13	+ 8.8	+2.8	1.77
	Keku Strait.								*Mean Lower Low Water.*		
4	Seclusion Harbor, Kuiu Island	56 38	133 52	8 55	Sitka	169	+0 05	−0 06	+ 2.3	+0.3	1.27
5	Port Camden, Kuiu Island	56 44	133 55	8 56	Sitka	169	+0 05	−0 20	+ 3.7	+0.3	1.42
6	Hamilton Bay, Kupreanof Island	56 55	133 50	8 55	Sitka	169	+0 03	−0 22	+ 3.3	+0.3	1.39
	Frederick Sound.										
7	Ideal Cove, Mitkof Island	56 40	132 38	8 51	Sitka	169	+0 27	+0 08	+ 4.9	+0.2	1.61
8	Brown Cove	56 58	132 48	8 51	Sitka	169	+0 12	+0 10	+ 5.8	0.0	1.75
9	Thomas Bay	57 00	132 52	8 51	Sitka	169	+0 10	+0 07	+ 5.3	+0.5	1.63
10	Portage Bay, Kupreanof Island	57 00	133 19	8 53	Sitka	169	+0 07	+0 04	+ 5.5	+0.5	1.65
11	Cleveland Passage, Whitney I	57 13	133 30	8 54	Sitka	169	+0 05	+0 03	+ 5.5	+0.5	1.66
12	Pybus Bay, Admiralty Island	57 19	134 00	8 56	Sitka	169	+0 06	+0 05	+ 4.9	+0.5	1.58
13	Eliza Harbor, Liesnoi Island	57 10	134 17	8 57	Sitka	169	+0 04	+0 03	+ 4.5	+0.3	1.53
14	Saginaw Bay, Kuiu Island	56 55	134 13	8 57	Sitka	169	+0 03	+0 02	+ 4.0	+0.4	1.46
	Stephens Passage.										
15	Port Houghton, Robert Islands	57 18	133 28	8 54	Sitka	169	+0 06	+0 03	+ 5.3	+0.5	1.62
16	Hobart Bay, Entrance Island	57 25	133 26	8 54	Sitka	169	+0 07	+0 04	+ 5.3	+0.5	1.63
17	Snug Cove, Gambier Bay	57 26	133 57	8 56	Sitka	169	+0 10	+0 07	+ 5.5	+0.5	1.66
18	Windham Bay	57 33	133 30	8 54	Sitka	169	+0 09	+0 06	+ 5.3	+0.5	1.63
19	Mole Harbor, Seymour Canal	57 40	134 08	8 57	Sitka	169	+0 15	+0 11	+ 5.5	+0.5	1.65
20	Windfall Harbor, Seymour Canal	57 52	134 16	8 57	Sitka	169	+0 40	+0 35	+ 7.1	+0.5	1.84
21	Holkham Bay, Harbor Island	57 46	133 37	8 54	Sitka	169	+0 11	+0 07	+ 5.3	+0.5	1.62
22	Port Snettisham, Point Styleman	57 58	133 53	8 56	Sitka	169	+0 15	+0 11	+ 5.9	+0.5	1.70
23	Taku Harbor	58 04	134 00	8 56	Sitka	169	+0 16	+0 12	+ 6.7	+0.5	1.79
24	Taku Inlet, Greeley Point	58 13	134 05	8 56	Sitka	169	+0 19	+0 15	+ 6.9	+0.5	1.81
25	Juneau, Gastineau Channel	58 18	134 24	8 58	Sitka	169	+0 36	+0 35	+ 7.4	+0.6	1.88
26	Fritz Cove, Douglas Island	58 19	134 36	8 58	Sitka	169	+0 16	+0 17	+ 5.3	+0.5	1.63
	Lynn Canal.										
27	Funter Bay, Mansfield Peninsula	58 15	134 53	9 00	Sitka	169	+0 10	+0 13	+ 5.9	+0.5	1.68
28	Barlow Cove, Mansfield Peninsula	58 20	134 58	9 00	Sitka	169	+0 13	+0 15	+ 6.1	+0.5	1.72
29	William Henry Bay	58 43	135 14	9 01	Sitka	169	+0 18	+0 12	+ 5.3	+0.5	1.63
30	Pyramid Harbor, Chilkat Inlet	59 11	135 28	9 02	Sitka	169	+0 23	+0 14	+ 5.7	+0.5	1.67
31	Portage Cove, Chilkoot Inlet	59 14	135 26	9 02	Sitka	169	+0 25	+0 15	+ 7.5	+0.7	1.89
32	Skagway	59 27	135 18	9 01	Sitka	169	+0 20	+0 22	+ 6.5	+0.1	1.83
	Chatham Strait.										
33	Port Conclusion, Baranof Island	56 16	134 31	8 58	Sitka	169	−0 03	−0 02	+ 0.9	+0.1	1.10
34	Security Bay, Kuiu Island	56 51	134 21	8 57	Sitka	169	+0 02	0 00	+ 3.8	+0.4	1.44
35	Whitewater Bay, Admiralty Island	57 11	134 31	8 58	Sitka	169	+0 07	+0 04	+ 4.1	+0.5	1.48
36	Killisnoo, Kootznahoo Roads	57 28	134 34	8 58	Sitka	169	+0 12	+0 08	+ 4.3	+0.5	1.50
37	Favorite Bay, Kootznahoo Inlet	57 29	134 33	8 58	Sitka	169	+0 37	+0 33	+ 3.8	+0.3	1.37
38	Mitchell Bay, Kootznahoo Inlet	57 32	134 24	8 58	Sitka	169	+1 49	+1 54	+ 1.4	+0.2	1.15
39	Freshwater Bay, Chichagof Island	57 51	135 01	9 00	Sitka	169	+0 18	+0 18	+ 4.6	+0.4	1.54
	Cordova Bay.										
40	Kassa Inlet	54 57	132 30	8 50	Sitka	169	−0 12	−0 11	+ 1.9	−0.2	1.27
41	Sulzer	55 17	132 40	8 51	Sitka	169	+0 10	+0 10	+ 2.7	0.0	1.35
	Outer coast.										
42	Port Alice, Davidson Inlet	55 48	133 36	8 54	Sitka	169	−0 11	−0 13	+ 0.9	−0.1	1.13
43	Cape Ommaney, Baranof Island	56 10	134 32	8 58	Sitka	169	−0 04	−0 08	− 0.2	−0.1	0.98
44	SITKA, Baranof Island	57 03	135 20	9 01	Sitka	169	0 00	0 00	0.0	0.0	1.00
	Peril Strait.										
45	Point Thatcher	57 23	134 51	8 59	Sitka	169	+0 11	+0 07	+ 4.2	+0.3	1.50
46	Nismeni Cove	57 33	135 25	9 02	Sitka	169	+0 25	+0 23	+ 4.8	+0.5	1.55
47	Pogibshi Anchorage	57 30	135 32	9 02	Sitka	169	+0 26	+0 26	+ 5.1	+0.4	1.61
48	Bear Bay	57 25	135 34	9 02	Sitka	169	+0 17	+0 17	+ 2.6	+0.3	1.30
49	SERGIUS NARROWS*	57 24	135 38	9 03	Sitka	169	+0 20	+0 25	+ 3.0	+0.2	1.38
50	Haley Anchorage, Fish Bay	57 22	135 30	9 02	Sitka	169	+0 12	+0 04	+ 0.4	+0.1	1.04
51	Whitestone Narrows, Neva Strait	57 15	135 30	9 02	Sitka	169	+0 06	0 00	+ 0.1	0.0	1.01
	Icy Strait and Cross Sound.										
52	Swanson Harbor	58 13	135 07	9 00	Sitka	169	+ 0 29	+ 0 28	+ 5.6	+0.5	1.64
53	Hooniah, Port Frederick	58 07	135 26	9 02	Sitka	169	+ 0 23	+ 0 25	+ 5.4	+0.3	1.66
54	Inian Cove	58 16	136 19	9 05	Sitka	169	− 0 22	+ 0 34	+ 1.8	−0.1	1.25
55	Port Althorp	58 07	136 17	9 05	Sitka	169	− 0 17	− 0 15	0.0	−0.2	1.04
56	Granite Cove	58 12	136 24	9 06	Sitka	169	+ 0 11	+ 0 13	+ 1.0	0.0	1.13

*The time of slack water at Sergius Narrows is given in Table 9 of this volume.

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW intervals.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	0 25	6 35	−0 02*b*	6 46*b*	13.2	16.9	8.8	16.8	2.1	5.9	.....	6.5	11.0	9.1	30.0
2	0 50	7 02	0 24*b*	7 12*b*	14.1	18.0	9.7	17.1	2.2	6.2	.....	6.8	11.4	9.9	30.5
3	0 30	6 40	0 04*b*	6 51*b*	13.7	17.5	9.2	16.9	2.1	6.0	.....	6.6	11.2	9.4	30.5
4	0 17	6 18	−0 14*b*	6 31*b*	9.8	12.5	6.6	12.9	1.8	5.1	.....	5.6	6.7	7.1	30.0
5	0 16	6 03	−0 14*b*	6 15*b*	11.0	14.1	7.4	14.8	1.9	5.4	.....	5.9	7.4	7.8	30.5
6	0 15	6 02	−0 15*b*	6 14*b*	10.7	13.7	7.2	13.9	1.9	5.3	.....	5.8	7.2	7.7	30.5
7	0 43	6 31	0 15*b*	6 42*b*	12.4	15.9	8.3	15.9	2.0	5.7	.....	6.3	8.0	8.7	30.5
8	0 28	6 38	0 02*b*	6 49*b*	13.5	17.5	9.2	16.6	2.1	6.0	.....	6.6	8.3	9.5	30.5
9	0 26	6 35	−0 02*b*	6 46*b*	12.6	16.1	8.4	16.1	2.0	5.8	.....	6.3	8.3	8.8	30.5
10	0 21	6 30	−0 07*b*	6 41*b*	12.7	16.3	8.5	16.2	2.0	5.8	.....	6.3	8.4	8.9	30.5
11	0 18	6 28	−0 10*b*	6 39*b*	12.8	16.4	8.6	16.3	2.0	5.8	.....	6.4	8.4	8.9	31.0
12	0 17	6 27	−0 12*b*	6 38*b*	12.2	15.6	8.2	15.7	2.0	5.7	.....	6.2	8.1	8.6	31.0
13	0 14	6 24	−0 15*b*	6 35*b*	11.8	15.1	7.9	15.2	2.0	5.6	.....	6.1	7.8	8.3	30.5
14	0 13	6 23	−0 17*b*	6 35*b*	11.3	14.5	7.6	14.6	1.9	5.5	.....	6.0	7.6	8.0	30.5
15	0 19	6 28	−0 09*b*	6 39*b*	12.5	16.0	8.4	16.0	2.0	5.8	.....	6.3	8.3	8.7	31.0
16	0 20	6 29	−0 08*b*	6 40*b*	12.6	16.1	8.4	16.1	2.0	5.8	.....	6.3	8.3	8.8	31.0
17	0 21	6 30	−0 07*b*	6 41*b*	12.8	16.4	8.6	16.3	2.0	5.8	.....	6.4	8.4	8.9	31.0
18	0 22	6 31	−0 06*b*	6 42*b*	12.6	16.1	8.4	16.1	2.0	5.8	.....	6.3	8.3	8.8	31.0
19	0 25	6 33	−0 03*b*	6 44*b*	12.7	16.3	8.5	16.2	2.0	5.8	.....	6.3	8.4	8.9	31.0
20	0 50	6 57	0 23*b*	7 07*b*	14.2	18.2	9.5	17.9	2.1	6.1	.....	6.7	9.2	9.7	31.0
21	0 24	6 32	−0 04*b*	6 43*b*	12.5	16.0	8.4	16.0	2.0	5.8	.....	6.3	8.3	8.7	31.0
22	0 26	6 34	−0 01*b*	6 45*b*	13.1	16.8	8.8	16.7	2.1	5.9	.....	6.4	8.6	9.1	31.5
23	0 27	6 35	0 00*b*	6 46*b*	13.8	17.7	9.2	17.4	2.1	6.0	.....	6.6	9.0	9.5	31.5
24	0 30	6 38	0 03*b*	6 49*b*	14.0	17.9	9.4	17.7	2.1	6.1	.....	6.7	9.1	9.6	31.5
25	0 45	6 56	0 19*b*	7 06*b*	14.5	18.6	9.7	18.3	2.2	6.2	.....	6.8	9.4	9.9	31.5
26	0 25	6 38	−0 03*b*	6 49*b*	12.6	16.1	8.4	16.1	2.0	5.8	.....	6.3	8.3	8.8	31.5
27	0 17	6 32	−0 10*b*	6 43*b*	13.0	16.6	8.7	16.6	2.1	5.9	.....	6.4	8.6	9.0	31.5
28	0 20	6 34	−0 07*b*	6 45*b*	13.3	17.0	8.9	16.9	2.1	5.9	.....	6.5	8.7	9.1	31.5
29	0 24	6 30	−0 04*b*	6 41*b*	12.6	16.1	8.4	16.1	2.0	5.8	.....	6.3	8.3	8.8	31.5
30	0 28	6 31	0 00*b*	6 42*b*	12.9	16.5	8.6	16.5	2.0	5.9	.....	6.4	8.5	8.9	32.0
31	0 30	6 32	0 04*b*	6 44*b*	14.6	18.7	9.8	18.4	2.2	6.2	.....	6.8	9.5	10.0	32.0
32	0 27	6 40	0 14*b*	6 54*b*	14.1	18.1	9.5	17.5	2.3	6.3	.....	6.9	8.7	9.8	32.0
33	0 06	6 19	−0 28*b*	6 32*b*	8.5	10.9	5.8	11.4	1.7	4.8	.....	5.2	5.9	6.3	30.0
34	0 12	6 22	−0 18*b*	6 34*b*	11.1	14.2	7.5	14.4	1.9	5.4	.....	5.9	7.5	7.9	30.0
35	0 16	6 25	−0 14*b*	6 37*b*	11.4	14.6	7.8	14.7	1.9	5.5	.....	6.0	7.6	8.1	30.5
36	0 21	6 29	−0 09*b*	6 40*b*	11.6	14.8	7.9	15.0	1.9	5.6	.....	6.1	7.8	8.2	31.0
37	0 46	6 54	0 15*b*	7 06*b*	10.6	13.6	7.2	13.8	1.9	5.3	.....	5.8	7.2	7.6	31.0
38	1 58	8 15	1 24*b*	8 28*b*	8.9	11.4	6.1	11.9	1.7	4.9	.....	5.3	6.2	6.5	31.0
39	0 25	6 37	−0 05*b*	6 48*b*	11.9	15.2	8.1	15.3	2.0	5.6	.....	6.1	7.9	8.4	31.0
40	0 06	6 18	−0 30*b*	6 34*b*	9.8	12.6	6.6	13.3	2.3	4.9	.....	5.4	6.3	7.4	29.0
41	0 27	6 38	−0 09*b*	6 54*b*	10.4	13.4	7.0	14.2	2.3	5.0	.....	5.5	6.8	7.7	29.5
42	0 03	6 12	−0 27*b*	6 26*b*	8.7	11.1	5.8	11.2	2.1	4.2	8 04	4.7	5.8	6.1	29.5
43	0 05	6 17	−0 31*b*	6 31*b*	7.6	9.7	5.2	10.3	1.6	4.5	.....	4.9	5.3	5.7	30.0
44	0 07	6 18	−0 29*b*	6 34*b*	7.7	9.9	5.2	10.5	2.1	4.5	8 02	4.9	5.4	5.8	30.0
45	0 19	6 27	−0 11*b*	6 39*b*	11.6	14.8	7.9	15.0	1.9	5.6	.....	6.1	7.7	8.2	30.5
46	0 30	6 40	0 01*b*	6 51*b*	12.0	15.4	8.2	15.4	2.0	5.6	.....	6.2	8.0	8.4	30.5
47	0 31	6 43	0 02*b*	6 54*b*	12.4	15.9	8.4	15.9	2.0	5.7	.....	6.3	8.2	8.7	30.5
48	0 22	6 34	−0 09*b*	6 46*b*	10.0	12.8	6.7	13.2	1.8	5.2	.....	5.6	6.8	7.2	30.5
49	0 25	6 41	−0 04*b*	6 53*b*	10.6	13.8	6.9	13.4	2.2	5.0	8 15	5.3	7.0	7.3	30.5
50	0 17	6 21	−0 18*b*	6 35*b*	8.0	10.2	5.4	10.8	1.6	4.6	.....	5.0	5.6	6.0	30.5
51	0 11	6 17	−0 25*b*	6 31*b*	7.8	10.0	5.3	10.5	1.6	4.5	.....	5.0	5.5	5.8	30.5
52	0 36	6 46	0 33*b*	7 08*b*	12.8	16.8	7.2	18.0	3.2	5.2	.....	6.1	8.4	10.2	31.0
53	0 29	6 42	0 04*b*	6 53*b*	12.8	16.5	8.4	15.5	2.3	5.1	8 16	5.5	8.2	8.4	31.0
54	12 05	6 47	11 56*a*	6 59*b*	9.6	12.6	6.3	11.3	2.4	4.0	.....	4.7	6.2	7.8	31.0
55	12 10	5 58	11 38*a*	6 11*b*	7.9	10.0	5.3	10.1	1.6	4.1	.....	4.4	5.3	5.6	31.0
56	0 13	6 26	0 50*b*	6 41*b*	8.7	11.0	5.9	11.3	2.2	4.5	.....	4.9	5.9	6.2	31.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (WEST COAST)—Continued.										
	ALASKA—continued.						*Time meridian, 135° W.*		*Mean Lower Low Water.*		
	Outer coast.	*North.*	*West.*								
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Port Mulgrave, Yakutat Bay	59 34	139 46	9 19	Sitka	169	+ 0 47	+ 0 43	− 0.3	0.0	0.95
2	Icy Bay	59 55	141 18	9 25	Sitka	169	+ 0 49	+ 0 50	− 0.4	0.0	0.94
3	Controller Bay, Wingham Island	60 05	144 48	9 39	Sitka	169	+ 0 27	+ 0 27	− 0.3	−0.3	1.00
							Time meridian, 150° W.				
4	Copper R. Delta, Kokinhenic I	60 18	145 03	9 40	Kodiak	173	− 0 32	+ 0 12	− 5.8	−1.4	0.36
5	Copper R. Delta, Pete Dahl Slough	60 29	145 24	9 42	Kodiak	173	− 0 33	− 0 07	+ 1.0	+0.2	1.12
6	Eyak River Entrance	60 28	145 40	9 43	Kodiak	173	− 0 25	+ 0 13	+ 1.0	−0.3	1.19
	Prince William Sound.										
7	Orca Inlet (Cape Whitshed)	60 27	145 50	9 43	Kodiak	173	− 0 40	− 0 14	+ 3.2	+0.3	1.42′
8	Orca	60 35	145 40	9 43	Kodiak	173	− 0 39	− 0 43	+ 3.3	+0.3	1.43
9	Windy Bay, Hawkins Island	60 34	145 55	9 44	Kodiak	173	− 0 48	− 0 45	+ 3.1	+0.3	1.41
10	Johnstone Point	60 29	146 32	9 46	Kodiak	173	− 0 48	− 0 43	+ 2.9	+0.4	1.36
11	Port Etches	60 19	146 40	9 47	Kodiak	173	− 0 50	− 0 43	+ 2.1	0.0	1.29
12	Hanning Bay	59 57	147 38	9 51	Kodiak	173	− 0 48	− 0 49	+ 2.6	+0.3	1.33
13	Discovery Bay	60 14	147 40	9 51	Kodiak	173	− 0 46	− 0 48	+ 2.6	+0.3	1.33
14	Smith Island	60 31	147 18	9 49	Kodiak	173	− 0 46	− 0 49	+ 2.7	+0.3	1.34
15	Snug Corner Cove	60 44	146 36	9 46	Kodiak	173	− 0 48	− 0 51	+ 2.8	+0.2	1.37
16	Rocky Point	60 57	146 42	9 47	Kodiak	173	− 0 46	− 0 49	+ 2.9	+0.2	1.38
17	Jack Bay	61 02	146 35	9 46	Kodiak	173	− 0 47	− 0 48	+ 3.2	+0.3	1.41
18	Valdez	61 07	146 13	9 45	Kodiak	173	− 0 47	− 0 45	+ 3.1	+0.3	1.39
	Resurrection Bay.										
19	Seward	60 06	149 26	9 58	Kodiak	173	− 0 48	− 0 44	+ 1.6	+0.1	1.21
	Cook Inlet.										
20	Port Chatham	59 13	151 44	10 07	Kodiak	173	+ 0 04	0 00	+ 5.3	+0.1	1.75
21	Port Graham	59 21	151 50	10 07	Kodiak	173	+ 0 25	+ 0 19	+ 7.5	0.0	2.09
22	Seldovia, Kachemak Bay	59 27	151 38	10 07	Kodiak	173	+ 0 26	+ 0 26	+ 8.8	+0.3	2.23
23	Chinulna Pt., Kenai River Ent	60 31	151 18	10 05	Kodiak	173	+ 2 19	+ 2 43	+11.7	+0.9	2.57
24	East Foreland	60 44	151 20	10 05	Kodiak	173	+ 3 03	+ 3 22	+11.9	+0.8	2.61
25	Fire Island	61 09	150 15	10 01	Kodiak	173	+ 4 49	+ 5 18	+18.3	+1.0	3.54
26	Sunrise, Turnagain Arm	60 53	149 26	9 58	Kodiak	173	+ 7 01	+ 7 20	+29.3	+1.2	5.07
27	Knik Arm	61 14	149 56	10 00	Kodiak	173	+ 5 18	+ 6 02	+22.9	+1.0	4.17
28	Iliamna Bay	59 36	153 37	10 14	Kodiak	173	+ 0 38	+ 0 40	+ 5.4	0.0	1.78
	Kodiak and Afognak Islands.										
29	Danger Bay, Marmot Bay	58 07	152 33	10 10	Kodiak	173	− 0 02	− 0 05	+ 0.3	0.0	1.04
30	Fox Bay, Whale Island	57 58	152 46	10 11	Kodiak	173	+ 0 07	+ 0 10	+ 1.2	0.0	1.17
31	Kizhuyak Bay	57 49	152 54	10 12	Kodiak	173	+ 0 06	+ 0 09	+ 0.7	0.0	1.10
32	Uzinki Point, Spruce Island	57 55	152 32	10 10	Kodiak	173	+ 0 03	+ 0 02	+ 0.3	0.0	1.04
33	KODIAK, Kodiak Harbor	57 47	152 24	10 10	Kodiak	173	0 00	0 00	0.0	0.0	1.00
34	Lazy Bay, Alitak Bay	56 53	154 15	10 17	Kodiak	173	− 0 02	+ 0 14	+ 2.8	+0.2	1.38
35	Uyak, Uyak Bay, Shelikof Strait	57 38	154 00	10 16	Kodiak	173	+ 0 10	+ 0 24	+ 4.9	+0.3	1.67
36	Uganik Passage	57 48	153 17	10 13	Kodiak	173	+ 0 19	+ 0 26	+ 5.3	+0.3	1.72
37	Onion Bay, Kupreanof Strait	58 03	153 13	10 13	Kodiak	173	+ 0 27	+ 0 24	+ 5.3	+0.4	1.71
38	Dry Spruce I., Kupreanof Strait	57 57	153 02	10 12	Kodiak	173	+ 0 28	+ 0 37	+ 4.9	+0.4	1.65
39	Alimvoak Bay, Shelikof Strait	58 10	152 57	10 12	Kodiak	173	+ 0 13	+ 0 25	+ 5.5	+0.4	1.74
	Alaska Peninsula.										
40	Katmai Bay, Shelikof Strait	58 05	154 49	10 19	Kodiak	173	+ 0 34	+ 0 39	+ 0.5	0.0	1.07
41	Anchorage Bay	56 18	158 23	10 34	Kodiak	173	+ 0 11	+ 0 11	− 0.5	−0.2	0.96
42	Shumagin Islands, Simeonof I	54 55	159 16	10 37	Kodiak	173	+ 0 40	+ 0 45	− 1.3	−0.1	0.84
43	Zacharefskaia Bay, Unga Strait	55 21	160 39	10 43	Kodiak	173	+ 0 57	+ 1 06	− 0.8	0.0	0.91
	Sannak Islands.						*Time meridian, 165° W.*				
44	Peterson Bay	54 23	162 38	10 51	Kodiak	173	− 0 45	− 0 31	− 2.5	+0.1	0.64
45	Acherk Harbor	54 29	162 48	10 51	Kodiak	173	− 0 47	− 0 25	− 1.6	+0.2	0.74
	Aleutian Islands.										
46	Ikatan Bay, Unimak Island	54 46	163 20	10 53	Kodiak	173	− 0 24	− 0 16	− 2.4	+0.2	0.65
47	Tigalda Bay, Tigalda Island	54 07	164 59	11 00	St. Michael	177	− 6 53	− 7 35	− 0.6	+0.4	0.76
48	Unalga Bay, Unalga Island	54 00	166 10	11 05	Galveston	129	+11 56	+11 32	+ 2.4	0.0	2.67
49	Dutch Harbor, Unalaska Island	53 54	166 32	11 06	Port Townsend	165	+ 0 05	+ 0 29	− 6.7	−3.6	0.39
50	Iliuliuk, Unalaska Island	53 53	166 32	11 06	Port Townsend	165	+ 0 04	+ 0 27	− 6.2	−3.4	0.45
51	Kashega Bay, Unalaska Island	53 28	167 05	11 08	St. Michael	177	− 7 12	− 7 32	+ 0.2	+0.8	0.93
52	Eagle Bay, Unalaska Island	53 28	166 54	11 08	Port Townsend	165	− 2 57	− 2 47	− 4.3	−3.0	0.75
53	Idak Cove, Umnak Island	53 27	167 42	11 11	St. Michael	177	− 7 07	− 6 16	− 0.4	−0.2	0.93
54	Adak Island	51 49	176 52	11 47	Port Townsend	165	− 1 29	− 1 09	− 5.9	−3.6	0.55
55	Kiska Harbor, Kiska Island	51 59	182 27	12 10	Port Townsend	165	− 0 33	− 0 13	− 7.3	−4.1	0.37
56	Attu Island	52 56	186 48	12 27	Port Townsend	165	+ 0 38	+ 1 03	− 5.9	−3.8	0.59
	Bering Sea.										
57	St. Paul Island, Pribilof Islands	57 08	170 18	11 21	Port Townsend	165	+ 0 46	+ 1 13	− 6.6	−3.6	0.41
58	Clark Pt., Nushagak Bay	58 51	158 32	10 34	Sitka	169	+ 0 29	−11 35	+ 8.5	+1.0	1.97
59	Goodnews Bay	59 02	161 45	10 47	Sitka	169	− 6 27	+ 6 12	+ 3.9	+1.2	1.85
60	Kuskokwim Bay	59 40	161 50	10 47	Sitka	169	− 6 17	+ 6 22	+ 3.5	+1.1	1.31
61	Nunivak Island	60 04	167 15	11 09	Sitka	169	− 4 59	− 5 18	− 6.6	−0.9	0.39
62	St. Matthew Island	60 20	172 25	11 30	Port Townsend	165	+ 1 19	+ 1 54	− 6.3	−3.6	0.47
63	St. Lawrence Island	63 20	170 00	11 20	Port Townsend	165	+ 2 03	+ 2 33	− 7.7	−3.9	0.26

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	0 06	6 13	− 0 02*b*	6 57*b*	7.4	9.5	5.0	10.1	1.6	4.4	.....	4.8	5.2	5.6	31.0
2	0 30	6 42	− 0 06*b*	6 56*b*	7.8	9.4	4.9	10.0	1.6	4.4	.....	4.8	5.2	5.5	30.0
3	12 20	6 06	12 16*a*	7 02*b*	7.7	10.0	4.5	11.4	3.2	4.1	.....	5.2	5.1	5.9	29.0
4	0 14	6 42	0 04*b*	7 19*b*	2.5	3.0	1.8	3.3	1.5	0.5	11 29	1.5	1.2	1.4	28.5
5	0 11	6 45	12 04*b*	7 04*b*	7.7	9.7	5.4	10.7	2.9	4.3	8 49	4.9	5.4	5.6	28.5
6	0 18	7 04	− 0 53*b*	7 17*b*	8.2	10.6	5.4	11.5	2.9	4.3	.....	4.9	5.1	5.7	28.5
7	0 04	6 36	12 00*a*	6 51*b*	9.8	12.8	6.3	12.6	2.9	4.7	8 28	5.2	6.5	6.7	28.5
8	0 05	6 07	12 01*a*	6 24*b*	9.9	12.9	6.3	12.7	2.7	4.4	8 22	5.1	6.5	6.7	28.5
9	12 20	6 04	11 52*a*	6 20*b*	9.7	12.6	6.3	12.4	2.4	4.5	8 00	5.0	6.4	6.7	28.5
10	12 18	6 04	11 49*a*	6 20*b*	9.4	12.3	6.0	12.1	2.4	4.5	.....	5.0	6.4	6.6	28.0
11	12 15	6 08	11 46*a*	6 19*b*	9.0	11.7	5.7	11.5	2.9	4.5	.....	5.1	5.8	6.3	28.0
12	12 13	5 53	11 44*a*	6 09*b*	9.2	12.0	5.9	11.8	2.3	4.5	.....	5.0	6.2	6.4	27.0
13	12 15	5 51	11 46*a*	6 10*b*	9.2	12.0	5.9	11.8	2.3	4.5	.....	5.0	6.2	6.5	27.5
14	12 17	5 55	11 48*a*	6 11*b*	9.3	12.0	5.9	11.8	2.3	4.5	.....	5.0	6.2	6.5	28.0
15	12 18	5 56	11 49*a*	6 12*b*	9.5	12.3	6.1	12.1	2.4	4.7	.....	5.1	6.2	6.6	28.5
16	12 19	5 57	11 50*a*	6 13*b*	9.6	12.4	6.1	12.4	2.5	4.7	.....	5.3	6.3	6.7	28.5
17	12 19	5 59	11 50*a*	6 10*b*	9.8	12.7	6.2	12.7	2.6	4.7	.....	5.4	6.5	6.8	28.5
18	12 20	6 03	11 51*a*	6 20*b*	9.7	12.5	6.2	12.6	2.6	4.7	7 59	5.4	6.4	6.8	28.5
19	12 05	5 50	11 37*a*	6 02*b*	8.4	10.9	5.4	10.7	2.6	4.3	.....	4.8	5.6	6.3	26.5
20	0 24	6 26	0 02*b*	6 54*b*	12.1	15.7	7.9	15.1	2.7	4.2	.....	5.0	7.5	7.9	25.0
21	0 45	6 45	0 25*b*	7 14*b*	14.4	18.7	9.4	17.2	2.7	4.6	.....	5.3	8.6	9.1	25.0
22	0 46	6 52	0 26*b*	7 20*b*	15.4	20.0	10.0	18.6	2.7	4.7	.....	5.4	9.3	9.8	25.0
23	2 41	9 11	2 20*b*	9 40*b*	17.7	23.1	11.5	21.7	2.7	4.9	.....	5.6	11.1	11.4	26.0
24	3 25	9 50	3 05*b*	10 20*b*	18.0	23.4	11.7	22.0	2.7	5.2	.....	5.9	11.2	11.6	26.0
25	5 15	11 50	4 50*b*	12 10*b*	24.4	31.7	15.9	28.7	2.8	6.5	.....	7.1	14.6	15.2	27.0
26	7 30	1 30	7 00*b*	1 50*a*	35.0	45.5	22.8	40.0	3.0	7.0	.....	7.6	20.0	21.0	27.0
27	5 45	0 10	5 20*b*	0 30*a*	28.8	37.4	18.7	33.2	2.9	7.0	.....	7.6	16.8	17.6	27.0
28	0 51	6 59	0 25*b*	7 20*b*	12.3	16.0	8.0	15.2	2.7	4.2	.....	5.0	7.5	8.0	24.0
29	0 15	6 18	− 0 18*b*	6 41*b*	7.2	9.3	4.7	10.1	2.7	3.6	.....	4.5	4.9	5.3	24.0
30	0 23	6 32	− 0 10*b*	6 55*b*	8.1	10.5	5.3	11.1	2.8	3.6	.....	4.6	5.4	5.8	24.0
31	0 21	6 30	− 0 12*b*	6 53*b*	7.6	9.8	5.6	10.6	2.8	3.6	.....	4.6	5.1	5.5	24.0
32	0 20	6 25	− 0 13*b*	6 48*b*	7.2	9.3	4.7	10.1	2.8	3.6	.....	4.6	4.9	5.2	24.0
33	0 17	6 23	− 0 16*b*	6 46*b*	6.9	8.9	4.5	9.7	2.7	3.6	8 54	4.5	4.8	5.0	24.0
34	0 08	6 30	− 0 22*b*	6 50*b*	9.5	12.2	6.1	12.6	2.8	4.4	.....	5.2	6.3	6.7	23.0
35	0 21	6 41	− 0 09*b*	7 00*b*	11.5	14.8	7.5	15.0	2.9	4.7	.....	5.5	7.4	7.9	23.0
36	0 33	6 46	0 03*b*	7 05*b*	11.9	15.3	7.7	15.5	2.9	4.8	.....	5.6	7.6	8.2	23.0
37	0 41	6 44	0 11*b*	7 04*b*	11.8	15.2	7.7	15.2	2.9	4.8	.....	5.6	7.6	8.1	23.0
38	0 43	6 58	0 13*b*	7 18*b*	11.4	14.7	7.4	14.7	2.9	4.7	.....	5.5	7.4	7.8	23.0
39	0 28	6 46	− 0 02*b*	7 06*b*	12.0	15.4	7.8	15.3	2.9	4.8	.....	5.6	7.7	8.1	23.0
40	0 40	6 53	0 11*b*	7 14*b*	7.4	9.6	4.8	10.2	2.8	3.7	.....	4.7	5.0	5.2	23.0
41	0 03	6 09	− 0 30*b*	6 32*b*	6.6	8.5	4.3	9.3	2.6	3.5	.....	4.4	4.4	4.6	21.5
42	0 29	6 40	− 0 04*b*	7 03*b*	5.8	7.5	3.8	8.3	2.4	3.3	.....	4.2	4.1	4.3	20.0
43	0 40	6 55	0 09*b*	7 17*b*	6.3	8.2	4.1	8.8	2.5	3.4	.....	4.3	4.4	4.6	20.0
44	12 13	6 10	11 15*a*	6 30*b*	4.4	5.7	2.8	7.0	1.8	4.1	7 34	4.4	3.6	4.0	18.5
45	12 11	6 16	11 17*a*	6 35*b*	5.1	6.6	3.3	7.9	1.9	4.4	.....	4.7	4.1	4.5	18.5
46	0 07	6 23	− 0 51*b*	6 43*b*	4.5	5.9	2.9	7.1	1.8	4.1	.....	4.5	3.7	4.1	18.5
47	[2 08]	[8 04]	0 08*b*	8 55*b*	[0.9]	[1.4]	[0.2]	3.5	.....	.....	9 35	3.5	1.2	1.7	17.5
48	[3 28]	[8 56]	6 30*a*	9 13*b*	[1.3]	[1.5]	[1.0]	4.0	.....	.....	9 32	3.6	1.8	2.5	17.0
49	3 51	10 00	1 43*b*	10 02*b*	2.0	2.2	1.9	4.3	0.4	3.7	10 02	3.6	2.3	2.7	17.0
50	3 50	9 58	1 44*b*	10 00*b*	2.3	2.9	1.5	4.9	0.5	4.0	.....	3.9	2.6	3.0	17.0
51	[3 12]	[9 27]	0 23*b*	9 32*b*	[1.5]	[1.7]	[1.2]	4.3	.....	.....	9 34	3.8	1.9	2.7	16.5
52	0 47	6 42	− 0 36*b*	7 52*b*	3.8	4.5	2.9	6.8	1.1	5.0	.....	5.1	3.7	4.0	16.5
53	[11 22]	[9 37]	12 09*a*	10 04*b*	[3.7]	[4.2]	[3.2]	4.3	.....	.....	.....	4.2	1.0	2.2	16.0
54	1 35	7 40	− 0 21*b*	8 29*b*	2.8	3.5	2.1	5.4	1.2	3.8	.....	4.0	2.7	3.3	11.0
55	2 07	8 12	0 11*b*	9 01*b*	1.9	2.5	1.4	4.0	1.4	2.7	.....	3.0	1.7	2.3	8.0
56	3 00	9 10	1 30*b*	9 40*b*	3.0	3.8	2.2	5.1	1.1	3.1	.....	3.3	2.5	3.1	6.0
57	4 17	10 29	6 15*a*	10 37*b*	2.1	2.7	1.4	4.0	0.6	3.5	.....	3.6	2.3	2.8	16.0
58	1 00	7 32	2 40*b*	7 43*a*	15.2	19.6	9.9	20.9	4.2	7.8	.....	8.9	10.2	11.3	21.5
59	6 15	0 15	7 38*a*	0 21*a*	10.4	13.5	6.9	15.8	3.4	7.7	.....	8.4	7.9	9.0	20.0
60	6 25	0 25	7 18*a*	0 29*a*	10.1	13.0	6.8	14.2	2.3	7.7	.....	8.0	7.7	8.5	20.0
61	7 20	0 47	7 10*a*	0 52*b*	3.0	3.9	2.1	5.5	1.5	1.6	.....	2.2	2.1	2.8	18.0
62	4 40	11 00	6 27*a*	11 08*b*	2.4	3.1	1.6	4.4	0.6	3.7	.....	3.8	2.5	3.0	15.5
63	5 35	11 50	8 01*a*	12 01*b*	1.3	1.7	0.9	2.8	0.5	2.7	.....	2.8	1.6	2.0	17.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	NORTH AMERICA (WEST COAST)—Continued.										
	ALASKA—continued.						*Time meridian, 165° W.*		*Mean Lower Low Water.*		
	Norton Sound, Bering Sea.	*North.*	*West.*								
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Cape Dyer	61 49	166 05	11 04	Kodiak	173	− 0 44	− 0 37	− 2.4	−0.6	0.75
2	Kripniyuk	62 20	165 19	11 01	Kodiak	173	+ 0 28	+ 0 40	− 3.9	−0.7	0.55
3	Yukon R., Delta, Kwiklok Pass	62 37	164 51	10 59	Kodiak	173	+ 2 41	+ 4 18	− 6.8	−1.2	0.20
4	Yukon R., Delta, Kwikpak Pass	63 00	164 45	10 59	Kodiak	173	+ 2 18	+ 3 23	− 6.2	−1.0	0.26
5	Yukon R., Delta, Apoon Pass	63 05	163 32	10 54	St. Michael	177	− 1 18	− 1 42	+ 0.2	0.0	1.04
6	Pitmiktalik	63 16	162 34	10 50	St. Michael	177	− 1 02	− 1 01	+ 0.4	0.0	1.09
7	ST. MICHAEL	63 29	162 02	10 48	St. Michael	177	0 00	0 00	0.0	0.0	1.00
8	North Bay, Stuart Island	63 37	162 30	10 50	St. Michael	177	− 0 22	− 0 16	− 0.2	+0.2	0.89
9	Golofnin Bay	64 32	163 00	10 52	St. Michael	177	+ 1 20	+ 2 16	− 0.2	+0.2	0.93
10	Nome	64 30	165 26	11 02	St. Michael	177	+ 4 50	+ 5 06	− 1.6	+1.0	0.46
	Bering Sea—Continued.										
11	Port Clarence	65 13	166 24	11 06	Kodiak	173	+ 5 58	+ 7 10	− 6.9	−1.0	0.14
	Arctic Ocean.										
12	Chamisso Island, Kotzebue Sound	66 15	161 45	10 47	Bombay	261	+ 5 39	− 6 01	− 5.8	−1.0	0.45
13	Point Barrow	71 18	156 40	10 27	Baltimore	97	+ 4 35	+ 4 06	− 0.8	0.0	0.33
	ASIA (EAST COAST).										
	SIBERIA.										
	Arctic Ocean.		*East.*				*Local time.*				
14	Pitlekaj	67 08	186 30	12 26	Baltimore	97	− 6 57	− 7 30	− 1.0	0.0	0.25
	Bering Sea—Continued.										
15	St. Lawrence Bay	65 38	189 00	12 36	Batavia	209	+ 7 26	+ 6 32	+ 1.1	−0.3	1.50
16	Plover Bay	64 22	186 38	12 27	Batavia	209	+ 6 48	+ 5 57	+ 1.2	−0.4	1.57
17	Anadir Bay	64 43	178 20	11 53	Batavia	209	+ 7 22	+ 6 28	+ 6.2	−1.4	3.75
18	Cape Olliutorsk	59 55	170 21	11 21	Aden	269	+10 20	+10 21	0.0	+0.4	0.91
19	Nikolski, Komandorski Ids	55 11	166 01	11 04	Aden	269	+ 7 51	+ 7 37	+ 0.4	+0.4	0.97
	Kamchatka.										
20	Petropavlovsk, Avatcha Bay	53 00	158 43	10 35	Aden	269	+ 7 52	+ 7 53	+ 0.6	+0.4	1.05
21	Cape Lopatka, Kuril Strait	50 45	156 50	10 27	Aden	269	+ 8 17	+ 8 16	+ 0.2	+0.4	0.94
	Okhotsk Sea.										
22	Tigil River Entr., Kamchatka	58 01	158 10	10 33	Aden	269	−11 59	−11 57	+11.4	+1.4	3.78
23	Gighiga River Entrance	62 00	160 40	10 43	Aden	269	− 7 23	− 7 07	+12.6	+1.4	4.12
24	Port Aian	56 25	138 30	9 14	Aden	269	− 7 50	− 6 44	+ 3.3	+0.7	1.71
25	Amur River Entrance	52 56	141 15	9 25	Aden	269	− 8 41	− 8 30	+ 0.1	+0.3	0.94
26	North Bay, Sakhalin Island	54 20	142 35	9 30	Aden	269	− 9 06	− 9 07	− 0.1	+0.4	0.86
	Siberia, Pacific Ocean.										
27	Castries Bay	51 26	140 52	9 23	Port Townsend	165	− 6 15	− 5 40	− 4.1	−3.7	0.92
28	Dui Road, Sakhalin Island	50 50	142 06	9 28	Port Townsend	165	− 6 20	− 5 45	− 5.0	−3.8	0.76
29	Barracouta Harbor	49 02	140 19	9 21	Port Townsend	165	− 7 10	− 6 40	− 7.1	−4.0	0.39
30	Aniwa Bay, Sakhalin Island	46 29	143 18	9 33	Aden	269	+12 24	+13 13	− 1.6	+0.2	0.62
31	Olga Bay	43 42	135 12	9 01	Port Townsend	165	− 3 39	− 3 09	− 7.3	−4.1	0.37
32	Vladivostok	43 07	131 54	8 48	Port Townsend	165	− 1 45	− 1 15	− 7.9	−4.2	0.27
	JAPAN.										
	Northeast Islands.						*Time meridian, 135° E.*		*Mean Low Water Springs.*		
33	Shakotan	43 52	146 49	9 47	Aden	269	+ 7 10	+ 7 08	− 2.0	−0.8	0.52
34	Taraku Sima	43 38	146 20	9 45	Yokohama	181	− 2 20	− 2 12	− 1.8	−0.2	0.56
35	Shuisho Sima	43 27	145 52	9 43	Aden	269	+ 7 29	+ 7 27	− 1.4	−0.1	0.65
	Hokushu Island.										
36	Soya Saki	45 31	141 54	9 28	Aden	269	−10 24	−10 25	+ 0.1	0.0	1.02
37	Notsuke Harbor	43 33	145 18	9 41	Aden	269	+ 8 33	+ 8 34	− 1.0	−0.3	0.80
38	Nemoro	43 20	145 35	9 42	Aden	269	+ 7 15	+ 7 14	− 2.4	−0.3	0.42
39	Akkeshi	43 02	144 51	9 39	Aden	269	+ 7 26	+ 7 24	− 1.6	−0.2	0.62
40	Kushiro	43 00	144 22	9 37	Port Townsend	165	− 1 34	− 1 07	− 7.7	−4.5	0.37
41	Mororan, Endermo Harbor	42 20	141 07	9 24	Aden	269	+ 7 32	+ 7 31	− 1.1	−0.1	0.72
42	Hakodate, Tsugar Strait	41 48	140 42	9 23	Aden	269	+ 7 41	+ 7 47	− 1.6	−0.2	0.61
43	Otaru, Sea of Japan	43 12	140 54	9 24	Port Townsend	165	− 1 09	− 0 42	− 9.5	−4.8	0.08

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gt).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
															East.
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	°
1	12 00	5 50	11 25*a*	6 15*b*	5.2	6.7	3.4	7.4	2.3	3.1	.....	3.9	3.3	3.8	19.0
2	0 50	7 10	0 08*b*	7 41*b*	3.8	4.9	2.5	5.8	2.0	2.7	.....	3.3	2.5	3.0	19.0
3	3 05	10 50	1 59*b*	11 39*b*	1.4	1.8	0.9	2.4	1.2	1.6	.....	2.0	0.8	1.3	20.0
4	2 42	9 55	1 43*b*	10 39*b*	1.8	2.3	1.2	3.1	1.3	1.8	.....	2.3	1.2	1.6	20.5
5	[6 50]	[1 00]	5 50*b*	2 30*a*	[1.2]	[1.0]	[1.1]	4.8	.....	.....	.....	4.6	1.4	2.1	20.5
6	[7 10]	[1 45]	6 10*b*	3 15*a*	[1.3]	[1.1]	[1.2]	5.0	.....	.....	.....	4.8	1.5	2.2	21.0
7	[8 07]	[1 27]	7 14*b*	4 18*a*	[1.2]	[1.4]	[0.9]	4.6	.....	.....	18 37	4.3	1.3	2.0	21.5
8	[7 50]	[2 30]	6 50*b*	4 00*a*	[0.9]	[1.0]	[0.8]	4.1	.....	.....	.....	1.4	1.3	1.8	21.5
9	[11 19]	[5 23]	8 30*b*	6 30*a*	[1.0]	[0.7]	[0.9]	2.7	.....	.....	.....	2.5	1.2	0.8	21.5
10	[2 05]	[8 25]	11 50*b*	9 10*a*	[1.3]	[1.5]	[0.8]	2.1	.....	.....	.....	1.8	1.0	1.1	20.5
11	6 10	1 10	5 29*b*	1 14*a*	1.0	1.1	0.9	1.5	0.3	0.8	13 46	0.8	0.8	0.9	20.0
12	5 00	11 50	4 40*a*	11 30*a*	4.0	5.0	3.0	5.5	1.0	1.8	.....	2.0	2.6	2.8	23.5
13	11 37	5 22	11 45*b*	4 47*b*	0.4	0.5	0.2	0.5	0.2	0.1	0 13	0.2	0.2	0.2	32.0
14	0 18	6 24	0 53*b*	5 48*b*	0.3	0.4	0.2	0.4	0.1	0.1	16 17	0.2	0.1	0.2	17.0
15	[6 10]	[12 10]	5 17*b*	14 45*b*	[0.8]	.....	.....	4.2	.....	.....	.....	4.0	1.3	1.9	17.5
16	[5 32]	[11 32]	4 39*b*	14 10*b*	[0.9]	.....	.....	4.4	.....	.....	.....	4.2	1.3	2.0	16.0
17	[6 06]	[12 06]	5 12*b*	14 40*b*	[2.1]	.....	.....	10.5	.....	.....	.....	10.3	3.3	5.0	11.0
18	6 00	12 15	5 00*b*	12 27*b*	3.3	4.5	1.8	4.8	0.7	2.8	.....	2.9	2.6	2.7	4.5
19	4 00	10 13	3 03*b*	10 25*b*	3.5	4.7	1.9	5.0	0.7	2.9	.....	3.0	2.8	2.9	1.5
															West.
20	3 30	9 45	2 35*b*	9 57*b*	3.3	5.1	2.1	5.4	0.7	3.0	.....	3.1	2.9	3.1	2.0
21	3 55	10 08	2 58*b*	10 19*b*	3.4	4.6	1.9	4.9	0.7	2.8	.....	2.9	2.7	2.9	2.5
22	3 30	2 20	3 01*b*	2 26*a*	13.7	18.5	7.5	16.7	1.4	5.7	.....	5.9	3.8	9.2	2.0
23	0 40	7 10	0 13*a*	7 16*a*	14.3	20.0	8.1	18.0	1.4	5.9	.....	6.1	9.4	9.9	0.0
24	0 10	7 30	— 0 33*a*	7 39*a*	6.2	8.4	3.4	8.2	0.9	3.8	.....	4.0	4.4	4.7	11.0
25	11 45	5 45	10 48*b*	5 56*a*	3.4	4.6	1.9	4.9	0.7	2.8	.....	2.9	2.6	2.9	9.5
26	11 20	5 08	10 20*b*	5 21*a*	3.1	4.2	1.7	4.5	0.6	2.7	.....	2.8	2.5	2.7	9.0
27	10 45	4 40	9 55*b*	5 49*a*	4.7	6.3	2.6	6.3	0.8	3.3	.....	3.5	3.5	3.6	9.5
28	10 40	4 35	9 46*b*	4 46*a*	3.9	5.2	2.2	5.5	0.7	3.0	.....	3.1	3.0	3.2	9.0
29	9 50	3 40	8 36*b*	3 55*a*	2.0	2.7	1.1	3.2	0.5	2.2	.....	2.2	1.8	2.0	9.0
30	8 00	2 48	6 42*b*	3 04*a*	1.9	2.6	1.1	3.0	0.5	2.1	.....	2.2	1.7	1.9	7.5
31	0 55	7 10	— 0 23*a*	7 26*a*	1.9	2.5	1.1	3.0	0.5	2.1	.....	2.2	1.7	1.9	7.5
32	2 45	9 00	1 13*a*	9 19*a*	1.4	1.9	0.8	2.4	0.4	1.8	.....	1.9	1.3	1.6	7.0
33	3 34	9 46	2 16*b*	10 02*b*	1.9	2.6	1.0	3.0	0.5	2.1	10 40	2.2	1.3	1.8	5.5
34	3 31	9 44	5 09*a*	9 39*b*	1.9	2.7	0.9	3.2	0.3	2.4	9 22	2.4	1.4	1.9	5.5
35	3 48	10 00	2 32*b*	10 22*b*	2.3	3.1	1.4	4.0	0.9	2.7	11 13	2.9	1.6	2.4	5.5
36	10 30	4 18	9 29*b*	4 35*a*	3.7	4.8	2.4	5.8	1.1	3.4	.....	3.7	2.4	3.3	7.5
37	4 50	11 05	3 43*b*	11 24*b*	2.9	3.7	1.8	4.7	1.0	3.0	.....	3.2	1.8	2.7	6.0
38	3 33	9 46	— 0 29*b*	9 49*b*	1.5	2.1	0.5	2.6	0.3	2.5	9 47	2.5	1.0	1.6	5.5
39	3 41	9 53	2 18*b*	10 00*b*	2.2	3.0	1.4	3.6	0.4	2.6	10 14	2.7	1.5	2.2	6.0
40	3 39	9 51	1 52*b*	9 54*b*	1.9	2.6	1.1	3.3	0.3	2.7	9 53	2.7	1.3	2.1	6.0
41	3 32	9 45	2 13*b*	9 56*b*	2.6	3.5	1.5	4.1	0.5	2.9	10 20	3.0	1.8	2.5	6.5
42	3 40	10 00	2 15*b*	10 11*b*	2.2	3.0	1.2	3.6	0.4	2.7	.....	2.7	1.5	2.2	6.5
43	3 50	10 02	1 42*a*	10 10*a*	0.4	0.5	0.3	0.8	0.1	0.7	22 38	0.7	0.2	0.5	7.0

Number.	Station.	Geographic position. Latitude.	Geographic position. Longitude. Arc.	Geographic position. Longitude. Time.	Standard port for reference. Name.	Standard port for reference. Page.	Tidal differences. Time. HW.	Tidal differences. Time. LW.	Tidal differences. Height. HW.	Tidal differences. Height. LW.	Ratio of ranges.
	ASIA (EAST COAST)—Continued.										
	JAPAN—continued.										
	Honshu Island.	*North.*	*East.*				*Time meridian, 135° E.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Moura	40 57	140 52	9 23	Nagasaki	185	− 4 57	− 5 01	−5.8	−0.9	0.21
2	Ominato	41 15	141 09	9 25	Singapore	205	+ 5 10	+ 5 16	−5.2	−1.0	0.26
3	Yamada Harbor	39 27	141 59	9 28	Yokohama	181	− 1 03	− 0 53	−1.2	−0.2	0.71
4	Tateyama	34 59	139 51	9 19	Yokohama	181	− 0 20	− 0 12	−1.0	−0.2	0.77
5	YOKOHAMA (Nishihatoba)	35 27	139 39	9 19	Yokohama	181	0 00	0 00	0.0	0.0	1.00
6	Yenoura	35 03	138 54	9 16	Karachi	265	+ 6 35	+ 6 39	−2.9	−0.3	0.54
7	Shimidzu	35 01	138 31	9 14	Karachi	265	+ 6 37	+ 6 40	−2.0	−0.3	0.52
8	Sakushima	34 44	137 02	9 08	Yokohama	181	+ 0 52	+ 1 00	+0.5	+0.1	1.44
9	Yokkaichi	34 57	136 38	9 07	Karachi	265	+ 6 58	+ 7 01	−0.9	0.0	0.85
10	Toba	34 29	136 50	9 07	Karachi	265	+ 6 52	+ 6 56	−2.1	−0.2	0.67
11	Matoya	34 22	136 52	9 07	Karachi	265	+ 6 45	+ 6 48	−2.7	−0.3	0.57
12	Hamashima	34 18	136 45	9 07	Karachi	265	+ 7 16	+ 7 19	−2.3	−0.2	0.63
13	Osaka Roads, Inland Sea	34 39	135 27	9 02	Karachi	265	+ 8 28	+ 8 39	−2.3	−0.2	0.63
14	Shimotsui, Inland Sea	34 26	133 48	8 55	Bombay	261	+11 34	+11 41	−3.0	−0.6	0.73
15	Tomo, Inland Sea	34 23	133 22	8 53	Bombay	261	+11 34	+11 42	−1.5	−0.3	0.87
16	Onomichi, Inland Sea	34 24	133 12	8 53	Bombay	261	+11 22	+11 29	−1.9	−0.5	0.85
17	Simonoseki	33 59	130 53	8 44	Nagasaki	185	+ 0 36	+ 0 34	−2.6	−1.1	0.76
18	Setozaki, Sea of Japan	34 24	131 12	8 45	Key West	125	+ 2 15	+ 2 14	+0.5	+0.2	1.21
19	Hagi, Sea of Japan	34 25	131 24	8 46	Hongkong	201	+ 1 18	+ 1 32	−2.9	−0.9	0.38
20	Yesaki, Sea of Japan	34 39	131 39	8 47	Hongkong	201	+ 1 44	+ 1 58	−3.3	−0.8	0.25
21	Tonoura, Sea of Japan	34 54	132 04	8 48	Hongkong	201	+ 2 16	+ 2 30	−3.6	−0.9	0.19
22	Sagiura, Sea of Japan	35 26	132 41	8 51	Hongkong	201	+ 3 40	+ 3 55	−3.8	−1.0	0.15
23	Yonago, Sea of Japan	35 22	133 18	8 53	Port Townsend	165	−12 01	−11 34	−9.5	−4.8	0.08
24	Shibayama, Sea of Japan	35 39	134 39	8 59	San Francisco Ent.	157	−10 17	− 9 53	−4.6	−1.2	0.13
25	Tsuiyama, Sea of Japan	35 39	134 50	8 59	Aden	269	− 5 31	− 5 32	−3.6	−0.5	0.14
26	Tsuruga Bay, Sea of Japan	35 43	136 00	9 04	Aden	269	− 5 34	− 5 36	−3.6	−0.5	0.14
27	Ao, Sea of Japan	36 53	136 59	9 08	Aden	269	− 5 22	− 5 24	−3.6	−0.5	0.14
28	Naoyedzu, Sea of Japan	37 11	138 14	9 13	Aden	269	− 5 25	− 5 27	−3.7	−0.5	0.12
29	Amaze, Sea of Japan	37 32	138 41	9 15	Aden	269	− 5 40	− 5 41	−3.7	−0.5	0.12
30	Funakawa, Sea of Japan	39 54	139 51	9 19	St. Michael	177	+ 4 58	+ 4 44	−2.6	+0.9	0.24
	Shikoku Island.										
31	Urado	33 30	133 35	8 54	Bombay	261	+ 6 41	+ 6 48	−6.5	−1.1	0.39
32	Susaki, Nomi Harbor	33 23	133 17	8 53	Karachi	265	+ 7 02	+ 7 06	−2.2	−0.2	0.66
33	Uwajima	33 13	132 33	8 50	Karachi	265	+ 8 27	+ 8 46	−2.0	−0.3	0.70
34	Aoshima, Inland Sea	33 44	132 29	8 50	Nagasaki	185	+ 0 38	+ 0 33	+0.4	0.0	1.06
	Kiushu Island.										
35	Kakaji, Inland Sea	33 40	131 31	8 46	Bombay	261	+ 9 20	+ 9 27	−2.4	−0.3	0.77
36	Tasman Bay	31 22	131 09	8 45	Karachi	265	+ 7 00	+ 7 04	−0.6	0.0	0.90
37	Yamagawa	31 13	130 38	8 43	Karachi	265	+ 8 37	+ 8 41	+1.8	+0.4	1.26
38	Kagoshima	31 35	130 34	8 42	Karachi	265	+ 7 59	+ 8 35	+2.6	+0.4	1.41
39	Kabashima	32 34	129 47	8 39	Shanghai	193	+ 0 05	− 1 34	−0.4	+0.7	0.85
40	NAGASAKI	32 45	129 52	8 39	Nagasaki	185	0 00	0 00	0.0	0.0	1.00
41	Matsushima	32 56	129 36	8 38	Nagasaki	185	+ 0 08	+ 0 03	+0.1	+0.1	1.00
42	Tawaranoura	33 07	129 40	8 39	Nagasaki	185	+ 0 18	+ 0 13	−0.1	0.0	0.98
43	Fukushima, Korea Strait	33 21	129 49	8 39	Nagasaki	185	+ 0 58	+ 0 53	−1.2	−0.2	0.83
44	Kariya, Korea Strait	33 28	129 50	8 39	Singapore	205	+11 46	+11 51	−1.5	−0.4	0.81
	Tsushima Island.										
45	Hirugaura, Korea Strait	34 19	129 16	8 37	Nagasaki	185	+ 1 09	+ 1 05	−1.5	−0.1	0.78
	Riu Kiu or Loo Choo Islands.										
46	Hancock Bay, Amami Ou Sima	28 17	129 10	8 37	Singapore	205	+ 9 55	+ 9 58	−1.5	−0.4	0.81
47	Naha Kiang, Okinawa Sima	26 12	127 40	8 31	Singapore	205	+ 9 01	+ 9 04	−1.9	−0.5	0.75
	Miyako Sima Islands.						*Time meridian, 120° E.*				
48	Miyako Sima	24 48	125 18	8 21	Singapore	205	+ 9 47	+ 9 52	−2.7	−0.6	0.63
	Formosa.										
49	Kelung Harbor	25 08	121 46	8 07	San Diego	153	−12 12	−12 12	−2.2	−0.6	0.58
50	Sauo Bay	24 46	121 50	8 07	San Diego	153	+ 8 23	+ 8 23	+0.3	−0.2	1.13
51	Takau Harbor	22 30	120 16	8 01	San Diego	153	−12 04	−12 03	−1.3	−0.5	0.79
52	Anping	23 00	120 09	8 01	San Diego	153	−12 09	−12 09	−0.6	−0.4	0.94
53	Tamsui Harbor	25 10	121 25	8 06	Singapore	205	+11 57	+12 02	0.0	−0.2	1.04

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above place of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn.)	Spring (Sg.)	Neap (Np.)	Great tropic (Gc.)	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	3 37	9 50	4 07a	9 50b	1.3	1.8	0.6	1.4	0.1	0.5	9 45	0.5	0.9	6.0	6.0
2	3 35	9 48	3 04b	9 51b	1.5	2.0	0.8	1.7	0.1	0.7	10 14	0.7	1.0	1.0	6.0
3	4 30	10 45	5 44a	10 40b	2.5	3.4	1.3	3.7	0.3	2.6	.....	2.6	1.7	2.3	5.5
4	5 04	11 17	6 16a	11 12b	2.7	3.7	1.4	4.0	0.3	2.7	10 50	2.7	1.8	2.4	4.5
5	5 24	11 29	4 26b	11 32b	3.5	4.8	1.9	4.9	0.4	2.9	11 39	2.9	2.4	3.0	4.5
6	5 52	12 05	6 41a	11 57b	3.0	4.2	1.5	4.0	0.4	2.1	11 13	2.2	2.1	2.3	4.5
7	5 52	12 04	6 44a	11 56b	2.9	3.9	1.6	3.9	0.4	2.2	11 13	2.3	2.0	2.3	4.5
8	6 06	12 19	7 07a	12 07b	3.9	5.4	2.0	5.6	0.8	3.4	11 19	3.6	2.7	3.3	4.5
9	6 05	12 17	6 44a	12 13b	4.7	6.4	2.6	5.8	0.4	2.7	11 44	2.7	3.2	3.4	4.5
10	5 59	12 12	6 47a	12 06b	3.7	5.0	2.1	4.9	0.4	2.6	11 32	2.7	2.5	2.9	4.5
11	5 52	12 04	6 44a	12 01b	3.2	4.3	1.7	4.2	0.3	2.4	11 42	2.4	2.2	2.5	4.5
12	6 23	0 10	7 24a	0 25a	3.5	4.7	2.0	4.7	0.5	2.5	11 40	2.5	2.4	2.8	4.5
13	7 30	1 25	8 30a	1 40a	3.5	4.7	2.0	4.7	0.5	2.5	.....	2.5	2.4	2.7	4.5
14	11 18	5 05	11 46a	5 42a	6.4	8.4	3.9	8.6	2.4	3.0	14 40	3.9	4.2	4.4	4.5
15	11 16	5 04	11 42a	4 44a	7.6	10.2	4.5	9.7	2.4	3.2	14 44	4.0	5.1	5.0	4.5
16	11 04	4 51	11 31a	4 35a	7.4	9.7	4.7	9.5	2.1	3.3	14 53	3.9	4.8	5.0	4.5
17	8 30	2 20	8 50b	2 13a	4.7	6.7	2.4	5.0	0.6	1.4	.....	1.5	3.4	2.7	4.5
18	10 56	4 42	10 29b	5 40a	1.5	2.0	0.7	2.2	1.2	0.6	21 16	1.4	1.0	1.0	4.5
19	11 16	5 03	10 43b	6 08a	1.3	1.7	0.6	2.0	1.2	0.7	21 20	1.4	0.8	0.9	4.5
20	11 41	5 28	10 57b	6 46a	0.8	1.1	0.5	1.6	1.0	0.6	21 41	1.2	0.6	0.7	4.5
21	12 12	5 59	11 41b	7 21a	0.6	0.8	0.4	1.2	0.8	0.3	22 45	0.9	0.4	0.5	5.0
22	1 06	7 21	0 29a	8 21a	0.5	0.6	0.3	0.9	0.5	0.3	23 19	0.6	0.3	0.4	5.0
23	4 51	11 03	3 02a	11 24a	0.4	0.4	0.2	0.7	0.1	0.6	24 15	0.6	0.2	0.4	5.0
24	2 07	8 20	0 42a	8 45a	0.5	0.6	0.4	0.9	0.2	0.6	21 57	0.7	0.3	0.5	5.0
25	2 28	8 41	0 51a	8 59a	0.5	0.6	0.4	0.9	0.2	0.7	21 53	0.7	0.3	0.5	5.0
26	2 30	8 42	0 52a	8 59a	0.5	0.6	0.4	0.9	0.2	0.7	.....	0.7	0.3	0.5	5.0
27	2 46	8 58	1 11a	9 23a	0.5	0.6	0.4	1.0	0.2	0.8	22 28	0.8	0.3	0.6	5.0
28	2 48	9 00	1 14a	9 28a	0.4	0.6	0.3	0.8	0.2	0.6	22 38	0.7	0.3	0.5	5.5
29	2 36	8 49	1 10a	9 15a	0.4	0.6	0.3	0.8	0.2	0.6	22 28	0.6	0.3	0.5	5.5
30	[3 07]	[9 19]	0 36a	9 51a	[0.5]	[0.7]	[0.4]	1.1	.....	.....	22 42	1.0	0.4	0.7	6.0
31	6 24	0 11	6 59a	— 0 10a	3.4	4.5	2.1	4.7	1.3	2.0	10 14	2.4	2.2	2.5	4.5
32	5 55	12 08	6 42a	12 05b	3.6	5.0	2.0	4.7	0.3	2.5	11 46	2.5	2.5	2.8	4.5
33	7 17	1 20	8 04a	1 17a	3.9	5.3	2.2	5.0	0.3	2.6	.....	2.6	2.6	2.9	4.5
34	8 38	2 25	9 00a	2 15a	6.6	8.9	3.8	7.6	1.2	2.2	12 52	2.5	4.4	4.0	4.5
35	8 55	2 42	9 24a	2 30a	6.7	9.2	3.7	8.2	1.3	3.1	13 22	3.4	4.6	4.5	4.5
36	5 45	11 58	6 25a	11 56b	5.0	6.8	2.8	6.3	0.4	2.9	.....	2.9	3.4	3.7	3.5
37	7 20	1 08	7 54a	1 06a	7.0	9.5	3.9	8.5	0.5	3.4	.....	3.4	4.8	4.9	3.5
38	6 40	1 00	7 12a	0 58a	7.8	10.5	4.4	9.4	0.5	3.6	.....	3.6	5.2	5.3	3.5
39	0 05	6 17	0 08b	5 45a	6.2	8.4	3.5	7.3	2.9	0.4	12 54	3.0	4.2	3.0	4.0
40	7 49	1 41	8 21a	1 37a	6.2	8.4	3.4	7.3	0.4	3.0	13 26	3.0	4.2	4.2	4.0
41	7 56	1 44	8 27a	1 37a	6.2	8.6	3.2	7.2	0.7	2.9	13 04	3.0	4.3	4.1	4.0
42	8 07	1 54	8 40a	1 48a	6.1	8.5	3.0	7.0	0.6	2.9	13 22	3.0	4.2	4.0	4.0
43	8 47	2 34	8 17b	2 36a	5.2	7.0	2.8	5.9	0.3	2.3	15 09	2.3	3.5	3.4	4.5
44	9 23	3 10	8 51b	3 18a	4.6	6.4	2.5	5.4	0.6	2.2	16 27	2.3	3.2	3.1	4.5
45	8 56	2 44	9 15a	2 37a	4.8	6.7	2.4	5.1	0.6	1.3	13 30	1.4	3.4	2.7	4.5
46	7 30	1 15	7 00b	1 29a	4.6	6.2	2.6	5.8	1.0	2.2	.....	2.4	3.1	3.1	3.0
47	6 30	0 15	6 00b	0 29a	4.3	5.8	2.5	5.4	1.0	2.1	.....	2.3	2.9	3.0	2.0
48	7 27	1 14	6 53b	1 30a	3.6	4.9	2.1	4.7	0.9	2.0	15 17	2.2	2.4	2.6	2.0
49	10 15	4 03	9 31b	4 23a	2.2	3.0	1.3	3.0	0.7	1 5	.....	1.7	1.5	1.7	1.5
50	6 00	12 13	5 26b	12 29b	4.3	5.8	2.5	5.4	1.0	2.1	.....	2.3	2.9	3.0	1.0
51	9 45	3 32	9 07b	3 49a	3.0	4.0	1.7	3.9	0.8	1.8	.....	2.0	2.0	2.2	0.5
52	9 50	3 38	9 15b	3 54a	3.6	4.9	2.1	4.6	0.9	1.9	.....	2.2	2.4	2.5	1.0
53	10 00	3 47	9 33b	3 59a	5.9	8.0	3.4	7.2	1.2	2.5	.....	2.8	4.0	3.9	1.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	ASIA (EAST COAST)—Continued.										
	KOREA.	North.	East.				Local time.		Mean Lower Low Water.		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Yung-hing Bay	39 13	127 18	8 29	San Diego	153	− 4 46	− 4 47	− 2.5	−0.5	0.47
2	Tsau-liang-hai or Chosan	35 07	129 03	8 36	San Diego	153	+10 05	+10 05	+ 1.2	−0.2	1.36
3	Port Hamilton	34 01	127 17	8 29	Calcutta	249	− 4 16	− 6 30	− 1.2	−0.8	0.96
4	Chemulpo (Inner Harbor)	37 29	126 36	8 26	Calcutta	249	− 9 02	−11 16	+12.4	−0.6	2.64
5	Seoul	37 30	127 00	8 28	Calcutta	249	+ 8 24	+ 6 33	− 4.2	−0.8	0.59
	CHINA.						Time meridian, 120° East.				
6	Port Arthur	38 50	121 16	8 05	Tientsin Entrance	169	− 5 30	− 6 08	− 0.8	0.0	0.89
7	Newchwang	40 35	122 00	8 08	Tientsin Entrance	169	+ 1 17	+ 0 46	+ 3.2	+0.4	1.40
8	TIENTSIN ENTR., Taku Light Ship	38 55	117 52	7 51	Tientsin Entrance	169	0 00	0 00	0.0	0.0	1.00
9	Tientsin	39 09	117 11	7 49	Tientsin Entrance	169	+ 3 56	+ 3 40	− 3.8	−0.4	0.58
10	Hwang or Yellow River Entr	37 54	118 34	7 54	Tientsin Entrance	169	+ 1 01	+ 0 28	+ 2.0	+0.2	1.24
11	Chefoo	37 34	121 31	8 06	Tientsin Entrance	169	− 5 11	− 5 49	− 0.2	0.0	0.96
12	Wei-hai-Wei	37 29	122 13	8 09	Tientsin Entrance	169	− 6 20	− 6 58	+ 0.6	+0.2	1.07
13	Shuntung Promontory	37 24	122 42	8 11	Tientsin Entrance	169	+ 0 43	+ 0 04	− 1.5	−0.1	0.81
14	Sang-kau Bay	37 08	122 27	8 10	Shanghai	193	+ 0 28	− 1 18	− 2.6	−0.6	0.74
15	Kyau-chau Harbor	36 00	120 20	8 01	Shanghai	193	+ 4 42	+ 3 02	+ 0.8	−0.8	1.22
16	SHANGHAI, Wusung Bar	31 21	121 30	8 06	Shanghai	193	0 00	0 00	0.0	0.0	1.00
17	Nankin, Yangtze River	32 10	118 55	7 56	Shanghai	193	− 1 38	− 3 18	− 4.9	−0.7	0.42
18	Hang Chu Bay	30 14	120 14	8 01	Shanghai	193	− 0 58	− 2 38	3.3	−0.1	1.47
19	Ning-Po, Yung River	29 57	121 47	8 07	Shanghai	193	+ 0 46	− 0 55	1.1	−0.7	0.95
20	Taichow Islands	28 24	121 52	8 07	Amoy	197	− 3 55	− 3 51	− 1.2	0.0	0.91
21	Namquam or Nam Kwan Harbor	27 12	120 23	8 02	Amoy	197	− 2 50	− 2 45	+ 1.4	+0.2	1.10
22	Min River Entrance	26 02	119 40	7 59	Amoy	197	− 2 52	− 2 47	+ 2.9	+0.1	1.22
23	Fuchau, Min River	26 03	119 24	7 58	Amoy	197	+ 0 19	+ 0 41	+ 3.2	+0.2	1.24
24	Hungwha Sound	25 24	119 14	7 57	Amoy	197	− 1 20	− 1 16	+ 6.4	+0.2	1.48
25	Meichen Sound	25 08	119 00	7 56	Amoy	197	+ 0 11	+ 0 15	+ 1.1	+0.1	1.06
26	Hui-i-tau Bay	24 36	118 26	7 54	Amoy	197	− 0 02	+ 0 02	+ 0.5	+0.1	1.03
27	AMOY (Inner Harbor)	24 28	118 03	7 52	Amoy	197	0 00	0 00	0.0	0.0	1.00
28	Tongsang Harbor	23 54	117 31	7 50	Amoy	197	− 1 06	− 1 03	3.1	−0.1	0.77
29	Swatow	23 20	116 40	7 47	Hongkong	201	− 7 40	+ 3 33	0.0	+0.2	0.91
30	Honghai Bay	22 50	115 11	7 41	Hongkong	201	+ 0 23	+ 0 37	+ 1.7	+0.1	1.48
31	HONGKONG	22 17	114 10	7 37	Hongkong	201	0 00	0 00	0.0	0.0	1.00
32	Whampoa	23 05	113 26	7 34	Hongkong	201	+ 3 53	+ 4 41	+ 1.2	−0.4	1.45
33	Canton	23 08	113 16	7 33	Hongkong	201	+ 5 06	+ 5 08	− 0.3	−0.9	1.18
34	Macao	22 14	113 34	7 34	Hongkong	201	+ 0 30	+ 0 45	+ 1.6	+0.2	1.45
35	Hui-ling-san Harbor	21 40	111 46	7 27	Hongkong	201	− 0 53	− 0 39	+ 2.6	+0.2	1.69
							Time meridian, 105° East.				
36	Tien pak Harbor	21 28	111 13	7 25	Hongkong	201	+ 1 39	+ 1 58	+ 3.2	+0.2	1.87
37	Nauchau Passage	21 00	110 38	7 23	Hongkong	201	+ 0 01	+ 0 15	+ 6.4	+0.6	2.75
38	Hoi Hau, Hainan Island	20 04	110 05	7 20	Hongkong	201	− 3 05	− 2 50	+ 3.1	+0.3	1.84
39	Yulinkan Bay, Hainan Island	18 15	109 33	7 18	Hongkong	201	− 1 08	− 0 53	− 1.8	−0.4	0.54
40	Pakhoi	21 27	109 02	7 16	Hongkong	201	+ 7 24	+ 7 38	+ 7.8	+0.6	3.20
	COCHIN CHINA.						Local time.				
41	Kua Kam	20 45	106 47	7 07	Hongkong	201	− 0 45	− 0 30	− 0.1	−0.1	1.00
42	Hue River Entrance	16 35	107 40	7 11	Hongkong	201	− 0 15	− 0 08	− 1.8	−0.4	0.57
43	Hon Kohe Bay	12 40	109 11	7 17	Singapore	205	−11 26	−11 20	− 2.2	−0.2	0.65
44	Saigon	10 50	106 42	7 07	Singapore	205	− 5 20	− 5 07	+ 1.8	+0.2	1.28
	SIAM.										
45	Chentabun River Entrance	12 28	102 07	6 48	Singapore	205	− 0 20	− 0 12	− 2.5	−0.3	0.60
46	Paknam, Menam River	13 30	100 38	6 43	Singapore	205	− 5 10	− 5 02	+ 0.6	0.0	1.07
47	Bangkok, Menam River	13 40	100 32	6 42	Singapore	205	− 2 20	− 2 02	− 0.2	0.0	0.95
	MALAY PENINSULA.										
	East coast.										
48	Lakon Roads	8 33	100 05	6 40	Singapore	205	− 0 15	− 0 09	− 2.6	−0.2	0.58
49	Singora	7 13	100 40	6 43	Singapore	205	− 2 00	− 1 54	− 4.0	−0.6	0.37
50	Tringano River	5 25	103 06	6 52	Singapore	205	− 2 20	− 2 14	− 1.4	−0.2	0.75
51	SINGAPORE	1 17	103 51	6 55	Singapore	205	0 00	0 00	0.0	0.0	1.00
	West coast.										
52	Malakka Road	2 12	102 12	6 49	Singapore	205	− 3 00	− 2 54	+ 2.4	+0.2	1.37
53	One Fathom Bank	2 52	100 59	6 44	Singapore	205	− 4 30	− 4 27	+ 5.6	+0.4	1.88
54	Perak River Entrance	4 05	100 44	6 43	Singapore	205	− 7 15	− 7 10	+ 0.9	+0.1	1.12
55	George-town, Penang Island	5 24	100 20	6 41	Singapore	205	−10 55	−10 47	+ 1.0	+0.2	1.14
56	Salang or Junkseylon Island	8 00	98 21	6 33	Singapore	205	+12 06	+12 24	+ 1.1	+0.1	1.16

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	5 10	11 22	4 23a	11 44b	1.8	2.5	1.0	2.6	0.7	1.4	.....	1.5	1.4	1.4	5.5
2	7 35	1 23	7 07b	1 36a	5.2	7.0	3.0	6.4	1.1	2.3	.....	2.6	3.4	3.5	5.0
3	9 05	2 52	9 12b	2 40a	7.7	10.5	4.2	7.2	1.4	0.7	.....	1.6	4.1	3.5	4.5
4	4 19	10 31	4 23b	10 24b	21.1	28.8	11.6	20.3	2.3	1.2	18 30	2.6	11.0	9.9	5.0
5	9 20	3 30	9 28a	3 15b	4.7	6.5	2.6	4.3	1.1	0.6	.....	1.2	2.6	2.0	6.0
6	10 05	3 53	9 26a	3 55b	6.5	7.5	5.5	8.8	0.2	4.4	.....	4.4	4.8	5.4	4.5
7	4 30	10 50	3 59b	10 52b	10.2	11.7	8.7	13.1	0.3	5.5	.....	5.5	7.0	7.7	5.0
8	2 56	9 47	2 20b	9 49b	7.3	8.4	6.2	9.8	0.2	4.6	9 41	4.7	5.2	5.9	3.5
9	6 50	1 00	6 00b	1 01a	3.9	4.5	3.3	5.7	0.2	3.4	.....	3.4	3.1	3.6	3.5
10	4 00	10 13	3 28b	10 15b	9.1	10.5	7.7	11.8	0.3	5.2	.....	5.2	6.3	7.0	3.0
11	10 25	4 13	9 47a	4 15b	7.0	8.1	6.0	9.4	0.2	4.5	.....	4.6	5.1	5.7	4.0
12	9 20	3 08	8 45a	3 10b	7.8	9.0	6.6	10.4	0.3	4.8	.....	4.8	5.6	6.2	4.5
13	4 00	10 12	3 20a	10 14a	5.9	6.8	5.0	8.1	0.2	4.2	.....	4.2	4.4	5.0	4.5
14	0 45	6 57	0 38b	7 21b	5.4	6.9	3.6	5.8	1.9	0.6	.....	2.0	2.4	2.6	4.0
15	4 50	11 03	4 45b	11 21b	8.9	11.4	6.0	9.4	2.4	0.7	.....	2.5	4.0	4.3	3.5
16	0 13	8 06	0 11b	8 25b	7.3	9.2	4.9	7.8	2.3	1.2	12 11	2.3	4.0	3.6	3.0
17	10 50	4 38	10 41a	5 10b	3.1	4.0	2.1	3.4	1.4	0.4	.....	1.5	1.2	1.5	3.0
18	11 35	5 23	11 30a	5 40b	10.7	13.7	7.2	11.2	2.6	0.8	.....	2.8	5.6	5.2	2.5
19	1 00	7 12	0 54b	7 33b	6.9	8.8	4.6	7.3	2.1	0.7	.....	2.2	3.1	3.3	2.5
20	8 50	2 37	9 05a	2 35a	11.6	14.1	8.9	12.9	0.4	3.0	.....	2.9	6.8	7.1	2.5
21	9 50	3 38	10 04a	3 36a	14.1	17.2	10.9	15.5	0.4	3.3	.....	3.2	8.2	8.4	2.0
22	9 45	3 33	9 56a	3 31a	15.6	19.0	12.0	17.0	0.5	3.4	.....	3.4	8.9	9.2	1.5
23	0 30	7 00	0 43b	6 58a	15.8	19.3	12.2	17.3	0.5	3.5	.....	3.4	9.1	9.4	1.0
24	11 15	5 02	11 27a	5 01a	18.9	23.0	14.6	20.5	0.5	3.8	.....	3.7	10.7	11.0	1.0
25	0 20	6 32	0 34b	6 30a	13.8	16.9	10.6	15.1	0.4	3.2	.....	3.2	8.0	8.2	1.0
26	0 05	6 17	0 19b	6 15a	13.2	16.1	10.2	14.5	0.4	3.2	.....	3.1	7.7	7.9	1.0
27	0 04	6 13	0 19b	6 12a	12.8	15.6	9.8	14.0	0.5	3.1	17 59	3.1	7.4	7.6	0.5
28	11 20	5 08	11 37a	5 06a	9.8	12.0	7.6	10.9	0.4	2.7	.....	2.7	5.8	6.0	0.5
29	1 58	6 39	2 59b	6 36a	3.0	3.5	2.5	3.3	1.4	3.5	18 40	3.5	2.8	3.1	0.5
30	9 50	3 37	9 13b	4 23a	4.9	6.4	3.0	8.2	3.7	3.1	.....	5.1	3.6	4.0	0.5
31	9 23	2 56	8 31b	3 51a	3.3	4.4	2.1	6.2	3.0	2.8	18 32	4.3	2.7	3.1	East. 0.0
32	0 43	7 34	0 17a	8 07a	4.8	6.0	3.3	7.1	3.0	2.9	22 42	3.8	3.1	3.5	0.0
33	2 00	8 00	1 19a	8 50a	3.9	5.1	2.4	6.8	3.3	2.8	.....	4.4	2.1	3.3	0.0
34	9 50	3 38	9 13b	4 24a	4.8	6.3	3.0	8.2	3.7	3.1	.....	5.0	3.6	3.9	0.0
35	8 20	2 07	7 45b	2 50a	5.6	7.4	3.5	9.2	4.0	3.4	.....	5.5	4.1	4.5	0.5
36	11 50	5 37	11 17b	6 17a	6.2	8.2	3.8	9.9	4.2	3.5	.....	5.7	4.3	4.8	0.5
37	10 10	3 57	9 42b	4 31a	9.1	12.0	5.6	13.6	5.1	4.3	.....	7.0	6.2	6.6	0.5
38	7 00	0 48	6 27b	1 29a	6.1	8.0	3.8	9.8	4.2	3.5	.....	5.7	4.4	4.8	0.5
39	8 55	2 43	7 53b	3 59a	1.8	2.3	1.1	3.8	2.3	1.9	.....	3.1	1.6	1.8	1.0
40	5 00	11 12	4 34a	11 43a	10.6	14.0	6.6	15.4	5.5	4.6	.....	7.5	6.9	7.6	0.5
41	9 00	2 48	8 14b	3 44a	3.3	4.3	2.1	6.0	3.1	2.6	.....	4.2	2.6	2.9	1.0
42	9 30	3 15	8 31b	4 27a	1.9	2.5	1.2	3.9	2.3	1.9	.....	3.1	1.6	1.8	1.5
43	11 20	5 08	10 27b	5 22a	3.7	5.0	2.2	5.2	0.9	3.0	.....	3.2	2.9	3.1	2.0
44	5 00	11 20	4 23a	11 30a	7.3	9.3	4.2	9.4	1.2	4.2	.....	4.4	5.1	5.4	2.0
45	10 00	3 50	9 06a	4 04b	3.4	4.5	2.1	4.8	0.8	2.9	.....	3.0	2.7	3.9	2.0
46	5 10	11 25	4 29a	11 36a	6.1	8.2	3.6	8.1	1.1	3.9	.....	4.1	4.4	4.6	1.5
47	8 00	2 00	7 17a	2 11b	5.4	7.3	3.1	7.2	1.1	3.6	.....	3.8	4.0	4.1	1.5
48	10 05	3 53	9 10a	4 08b	3.3	4.5	1.9	4.7	0.8	2.9	.....	3.0	2.7	2.7	1.0
49	8 20	2 08	7 10a	2 26b	2.1	2.8	1.2	3.3	0.7	2.3	.....	2.4	1.8	1.9	1.0
50	8 00	1 48	7 12a	2 01b	4.3	5.3	2.5	6.0	1.0	3.3	.....	3.4	3.3	3.5	1.5
51	10 20	4 02	9 37a	4 15b	5.7	7.4	3.5	7.6	1.1	3.8	5 14	3.9	4.1	4.4	1.0
52	7 20	1 06	6 44a	1 17b	7.8	10.5	4.5	10.0	1.3	4.4	.....	4.6	5.4	5.7	1.0
53	5 50	12 00	5 19a	12 08a	10.7	14.4	6.2	13.3	1.5	5.1	.....	5.4	7.1	7.4	1.0
54	3 05	9 17	2 26a	9 27a	6.4	8.6	3.7	8.4	1.2	4.0	.....	4.1	4.6	4.8	1.0
55	11 50	5 40	11 11b	5 50a	6.5	8.8	3.8	8.5	1.2	4.0	.....	4.2	4.7	4.9	1.0
56	10 00	4 00	9 22b	4 10a	6.6	8.9	3.8	8.6	1.2	4.0	.....	4.2	4.7	4.9	0.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	MALAY OR EASTERN ARCHIPELAGO.										
	EAST INDIES.										
	Malakka Strait, Sumatra.	*North.*	*East.*				*Local time.*		*Mean Lower Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Acheh Head	5 33	95 18	6 21	Singapore	205	+12 06	+12 08	−2.0	−0.2	0.68
2	Diamond Point	5 16	97 30	6 30	Singapore	205	+10 54	−10 52	+0.9	+0.1	1.12
3	Deli River Entrance	3 45	98 43	6 35	Singapore	205	− 7 31	− 7 29	+0.9	0.0	1.11
4	Siak River Entrance	1 20	102 14	6 49	Singapore	205	− 1 30	− 1 38	+3.1	+0.3	1.47
5	Garras Light, Rhio Strait	0 45	104 21	6 57	Singapore	205	− 0 40	− 0 48	−0.4	0.0	0.93
	Sumatra, east coast, etc.	*South.*									
6	Linga, Linga Island	0 14	104 34	6 58	Singapore	205	− 4 20	− 4 14	+3.2	+0.2	1.49
7	Tanjong Kalean, Banka Strait	1 58	105 07	7 00	Galveston	129	+12 27	+10 59	+7.5	−1.3	6.87
8	Nangka Island, Banka Strait	2 24	105 47	7 03	Galveston	129	+13 00	+13 14	+6.7	−1.1	6.20
9	Banka Point, Banka Strait	2 53	106 08	7 05	Galveston	129	+12 02	+12 00	+6.0	−1.0	5.60
10	Tobo Ali Bay, Banka Strait	3 00	106 27	7 06	Galveston	129	− 9 34	− 9 17	+7.5	−1.1	6.73
11	Clifton Shoal	4 54	106 03	7 04	Galveston	129	− 8 05	− 9 14	+2.4	−0.6	3.00
	Sunda Strait.										
12	Java Fourth Point	6 04	105 53	7 04	Sitka	169	+ 6 30	+ 6 30	−7.4	−1.4	0.22
13	Krakatoa Island	6 09	105 25	7 02	Sitka	169	+ 6 09	+ 6 09	−6.5	−1.4	0.34
14	Kalang Bayang Harbor, Sumatra	5 44	105 02	7 00	Sitka	169	+ 5 29	+ 5 32	−7.7	−1.4	0.18
15	Java First Point	6 44	105 11	7 01	Sitka	169	+ 4 49	+ 4 49	−7.4	−1.4	0.22
	Sumatra, southwest coast.										
16	Flat Cape	5 56	104 33	6 58	Key West	125	− 3 12	− 3 13	+0.7	+0.1	1.49
17	Benkulen	3 41	102 13	6 49	Key West	125	− 3 02	− 3 02	+1.7	+0.1	2.32
18	Padang	0 56	100 23	6 42	Key West	125	− 3 16	− 3 16	+2.7	+0.1	3.14
		North.									
19	Ayer Bangies	0 12	99 23	6 38	Key West	125	− 3 22	− 3 22	+0.8	0.0	1.59
20	Tapanuli Bay	1 35	98 50	6 35	Key West	125	− 3 01	− 3 02	+2.8	+0.2	3.28
	Java, etc.	*South.*									
21	BATAVIA (Tandjong Priok)	6 06	106 53	7 08	Batavia	209	0 00	0 00	0.0	0.0	1.00
22	Samarang	6 57	110 25	7 22	Batavia	209	− 0 42	+ 1 54	+1.0	−0.2	1.43
23	Panka Point	6 55	112 34	7 30	Batavia	209	+10 17	+12 53	+1.9	−0.3	1.79
24	Arisbaya, Surabaya Strait	6 56	112 50	7 31	Batavia	209	+ 9 47	+12 12	+2.0	−0.4	1.82
25	Sembilangan, Surabaya Strait	7 04	112 40	7 31	Batavia	209	+12 50	+ 9 21	+1.9	−0.3	1.79
26	Surabaya, Surabaya Strait	7 12	112 44	7 31	Hongkong	201	+ 2 21	+ 2 35	+0.6	+0.4	1.09
27	Gading, Madura Strait	7 11	112 54	7 32	Aden	269	− 8 30	− 8 31	+1.8	+0.8	1.25
28	Karang Kleta, Madura Strait	7 20	112 48	7 31	Aden	269	− 8 36	− 8 38	+1.8	+0.8	1.25
29	Pasuruan, Madura Strait	7 38	112 55	7 32	Aden	269	− 8 38	− 8 40	+1.6	+0.8	1.25
30	Sapeedie Island, Madura Strait	7 05	114 16	7 37	Batavia	209	+12 25	+10 41	+2.4	+0.2	1.79
31	Meinderts Reef, Madura Strait	7 40	114 26	7 38	Batavia	209	+12 12	+10 16	+1.8	+0.2	1.57
32	Banjoewangi, Baly Strait	8 13	114 23	7 38	Sydney	233	−11 06	−11 08	+1.8	−0.4	1.63
33	Pangul, Java, south coast	8 16	111 26	7 26	Sydney	233	−11 51	−11 50	+0.4	−0.4	1.24
34	Tylatiap, Java, south coast	7 45	109 04	7 16	Sydney	233	+12 17	+12 18	−0.2	−0.4	1.09
35	Wynkoops Bay, Java, south coast	6 55	106 30	7 06	Sydney	233	+ 8 35	+ 8 35	+0.1	−0.3	1.13
	Bali.										
36	Tebunkus Road	8 11	115 00	7 40	Sydney	233	+ 8 39	+ 8 39	+0.6	−0.4	1.27
37	Badong Bay	8 42	115 07	7 40	Sydney	233	−10 16	−10 15	+2.4	−0.4	1.83
	Lombok.										
38	Ampenam Bay	8 35	116 04	7 44	Sydney	233	+11 34	+11 34	+0.4	−0.4	1.21
39	Piju Bay	8 49	116 31	7 46	Sydney	233	− 9 37	− 9 36	+4.0	−0.4	2.28
	Sumbawa.										
40	Bima Bay	8 25	118 42	7 55	Sydney	233	− 8 42	− 8 42	+0.3	−0.4	1.21
41	Sapie Bay	8 30	119 01	7 56	Sydney	233	− 7 52	− 7 51	+3.0	−0.4	2.01
	Sumba or Sandalwood Island.										
42	Palmedo Road	9 22	119 45	7 59	Sydney	233	− 9 07	− 9 06	+6.2	−0.4	2.96
43	Nangamessie Harbor	9 34	120 15	8 01	Sydney	233	− 9 47	− 9 47	+8.0	−0.4	3.46
	Flores or Mangarei Island.										
44	Alligator Bay	8 45	119 50	7 59	Sydney	233	− 8 47	− 8 46	+0.4	−0.4	1.21
45	Adenara, Adenara Island	8 14	123 07	8 12	Sydney	233	−10 07	−10 06	+1.7	−0.3	1.60
	Timor.										
46	Koepang	10 10	123 35	8 14	Sydney	233	−10 17	−10 17	+2.2	−0.4	1.78
47	Dilhi	8 34	125 48	8 23	Sydney	233	− 7 58	− 7 57	+0.4	−0.4	1.21
48	Cyrus Harbor, Rotti Island	10 51	123 05	8 12	Sydney	233	− 9 17	− 9 17	+0.2	−0.4	1.15

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											East.
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	°
1	10 00	3 44	9 10*b*	3 57*a*	3.9	5.2	2.3	5.5	0.9	3.1	.....	3.2	3.0	3.2	0.0
2	11 50	5 34	11 11*b*	5 45*a*	6.4	8.7	3.7	8.4	1.2	4.0	.....	4.2	4.6	4.8	0.5
3	2 48	8 57	2 08*a*	9 07*a*	6.3	8.5	3.7	8.3	1.2	3.9	.....	4.1	4.5	4.7	0.5
4	8 50	2 24	8 16*a*	2 33*b*	8.4	11.3	4.9	10.7	1.3	4.6	.....	4.8	5.8	6.1	1.0
5	9 40	3 14	8 54*a*	3 26*b*	5.3	7.1	3.1	7.1	1.1	3.6	.....	3.8	3.9	4.1	1.0
6	6 00	12 13	5 26*a*	12 22*a*	8.5	11.5	4.9	10.8	1.3	4.6	.....	4.8	5.8	6.1	1.0
7	[6 25]	[0 12]	7 45*a*	— 3 01*a*	[4.1]	.....	.....	10.3	.....	.....	8 37	9.9	3.7	5.1	1.0
8	[6 50]	[0 38]	8 22*a*	— 0 46*a*	[3.7]	.....	.....	9.3	.....	.....	.....	8.2	3.4	4.6	1.0
9	[5 42]	[11 54]	7 20*a*	10 25*b*	[3.4]	.....	.....	8.4	.....	.....	8 54	7.8	3.1	4.2	1.0
10	[9 05]	[2 52]	10 34*a*	1 31*a*	[4.0]	.....	.....	10.1	.....	.....	.....	8.6	3.8	5.2	1.0
11	[9 50]	[3 37]	12 03*a*	1 36*a*	[1.8]	.....	.....	4.5	.....	.....	.....	5.7	1.5	2.2	0.5
12	7 11	0 58	6 46*b*	1 09*a*	1.7	2.4	0.7	1.8	0.3	0.6	15 01	0.6	1.0	1.0	0.5
13	6 50	0 37	6 25*b*	0 48*a*	2.6	3.8	1.1	2.7	0.3	0.7	.....	0.8	1.5	1.5	0.0
14	6 10	0 00	5 42*b*	0 12*a*	1.4	2.0	0.6	1.5	0.3	0.5	.....	0.6	0.9	0.8	0.0
15	5 30	11 42	5 07*b*	11 52*b*	1.7	2.5	0.7	1.8	0.3	0.6	.....	0.6	1.0	1.0	0.0
16	5 40	11 52	5 33*b*	12 41*b*	1.8	2.6	0.7	2.5	1.3	0.2	.....	1.3	1.0	0.9	0.0
17	5 50	12 03	5 48*b*	12 42*b*	2.8	4.0	1.1	3.7	1.6	0.3	.....	1.6	1.5	1.4	0.0
18	5 35	11 48	5 34*b*	12 20*b*	3.8	5.5	1.4	4.8	1.8	0.3	.....	1.8	2.0	1.9	0.0
19	5 29	11 42	5 27*b*	12 28*b*	1.9	2.8	0.7	2.6	1.3	0.2	17 33	1.3	1.0	1.0	0.0
20	5 50	12 02	5 49*b*	12 35*b*	3.9	5.7	1.5	4.9	1.9	0.3	.....	1.9	2.1	2.0	0.0
21	[12 04]	[5 52]	10 05*a*	8 02*b*	[0.5]	[0.7]	[0.0]	2.8	.....	.....	9 05	2.7	0.9	1.4	0.5
22	[6 00]	[12 13]	9 23*a*	9 56*b*	[0.8]	.....	.....	4.0	.....	.....	9 35	3.8	1.3	2.0	1.0
23	[4 35]	[10 48]	7 56*b*	8 31*a*	[1.0]	.....	.....	5.0	.....	.....	20 42	5.0	1.7	2.5	1.0
24	[3 35]	[9 48]	7 28*b*	7 50*a*	[1.0]	.....	.....	5.1	.....	.....	20 07	5.1	1.7	2.5	1.0
25	[12 09]	[5 56]	10 31*b*	4 59*a*	[1.0]	.....	.....	5.0	.....	.....	20 13	4.7	1.7	2.5	1.0
26	12 07	5 54	10 54*b*	6 42*a*	3.6	4.9	1.7	6.5	2.6	3.8	20 35	5.0	3.2	3.4	1.0
27	11 52	5 40	10 50*b*	6 07*a*	4.5	6.2	2.3	7.2	2.1	4.3	19 44	4.8	3.7	4.0	1.0
28	11 46	5 33	10 49*b*	6 02*a*	4.5	6.2	2.4	7.5	2.3	4.2	19 48	4.8	3.7	4.1	1.0
29	11 44	5 31	10 46*b*	6 02*a*	4.5	6.2	2.3	7.2	2.3	4.0	19 50	4.7	3.6	4.0	1.0
30	[11 38]	[5 25]	10 06*b*	6 19*a*	[2.3]	[2.9]	[1.6]	5.0	.....	.....	19 58	4.2	2.2	2.7	1.0
31	[11 17]	[5 04]	9 53*b*	5 54*a*	[2.1]	[2.6]	[1.5]	4.4	.....	.....	19 38	3.9	1.9	2.4	1.0
32	10 00	3 45	9 45*b*	4 13*a*	5.5	7.8	2.6	6.6	2.2	1.3	19 15	2.6	2.8	3.1	1.0
33	9 15	3 08	8 59*b*	3 34*a*	4.2	5.9	2.0	5.1	1.9	1.1	.....	2.2	2.1	2.4	1.0
34	8 33	2 21	8 16*b*	2 54*a*	3.7	5.2	1.8	4.5	1.8	1.0	18 44	2.1	1.8	2.1	0.5
35	4 50	11 02	4 33*b*	11 34*b*	3.8	5.3	1.8	4.7	1.8	1.1	.....	2.1	2.0	2.2	0.0
36	4 55	11 07	4 39*b*	11 38*b*	4.3	6.0	2.1	5.2	1.9	1.1	.....	2.3	2.2	2.4	1.0
37	10 50	4 38	10 36*b*	5 04*a*	6.2	8.7	3.0	7.3	2.3	1.3	.....	2.7	3.1	3.4	1.0
38	7 50	1 37	7 33*b*	2 09*a*	4.1	5.8	2.0	5.0	1.9	1.1	.....	2.2	2.1	2.3	1.0
39	11 30	5 18	11 18*b*	5 41*a*	7.7	10.9	3.7	8.9	2.6	1.5	.....	3.0	3.9	4.2	1.0
40	0 00	6 12	— 0 17*a*	6 44*a*	4.1	5.7	2.0	5.0	1.9	1.1	.....	2.2	2.1	2.3	1.5
41	0 50	7 03	0 37*a*	7 27*a*	6.8	9.6	3.3	8.0	2.5	1.4	.....	2.8	3.4	3.7	1.5
42	12 00	5 48	11 49*b*	6 08*a*	10.0	14.2	4.8	11.4	3.0	1.7	.....	3.4	5.0	5.4	1.5
43	11 20	5 07	11 10*b*	5 26*a*	11.7	16.5	5.6	13.2	3.2	1.9	.....	3.7	5.9	6.3	1.5
44	12 20	6 08	12 03*b*	6 40*a*	4.1	5.7	2.0	5.0	1.9	1.1	.....	2.2	2.1	2.3	1.5
45	11 00	4 48	10 46*b*	5 15*a*	5.4	7.6	2.6	6.5	2.2	1.3	.....	2.5	2.8	3.0	2.0
46	10 50	4 37	10 36*b*	5 02*a*	6.0	8.5	2.9	7.1	2.3	1.3	.....	2.7	3.0	3.3	2.0
47	0 45	6 58	0 28*a*	7 30*a*	4.1	5.7	2.0	5.0	1.9	1.1	.....	2.2	2.1	2.3	2.0
48	11 50	5 37	11 33*b*	6 09*a*	3.9	5.5	1.9	4.8	1.9	1.1	.....	2.1	2.0	2.2	2.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	MALAY OR EASTERN ARCHIPELAGO—Continued.										
	EAST INDIES—continued.										
	Gaspar Strait.	*South.*	*East.*				*Local time.*		*Mean Lower Low Water.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Langwas Island, Billiton Island	2 32	107 37	7 10	Batavia	209	− 2 20	− 0 13	+3.2	−0.6	2.36
2	Shoalwater Island	3 19	107 13	7 09	Batavia	209	− 1 55	+ 0 08	+2.4	−0.4	2.00
	Carimata Strait.										
3	Montaran Islands	2 35	108 44	7 15	Batavia	209	+ 5 27	+ 7 31	+1.8	−0.4	1.75
4	Kumpul Island	2 43	110 04	7 20	Batavia	209	+ 6 17	+ 8 20	+4.0	−0.8	2.68
	Borneo.										
5	Bajor, Koetei River Entrance	0 43	117 33	7 50	Galveston	129	+ 1 40	+ 2 32	+4.8	−0.8	4.67
6	Kotta Baroe Reef	3 12	116 40	7 47	Galveston	129	− 0 34	− 0 18	+4.0	+1.0	3.07
7	Jelai River Entrance	2 53	110 45	7 23	Singapore	205	+ 1 09	+ 1 15	−0.3	−0.1	0.95
8	Padang Tikar River	0 38	109 15	7 17	Singapore	205	− 3 21	− 3 16	−0.4	0.0	0.93
		North.									
9	Burong Islands	0 47	108 42	7 15	Singapore	205	− 5 46	− 5 41	−0.7	−0.1	0.88
10	Po Point, Sarawak River Entrance	1 43	110 31	7 22	Singapore	205	− 6 21	− 6 16	+1.2	0.0	1.18
11	Sarawak, Sarawak River	1 32	110 21	7 22	Singapore	205	− 5 01	− 4 58	+5.2	+0.4	1.82
12	Victoria Harbor, Labuan Island	5 20	115 12	7 41	Singapore	205	+11 38	+11 44	−1.6	−0.2	0.72
13	Kudat Harbor	6 53	116 51	7 47	Manila	213	− 0 43	− 0 17	−0.1	−0.1	1.00
14	Sandakan Harbor	5 50	118 07	7 52	Manila	213	− 0 09	− 0 27	+2.4	−0.2	1.59
	Celebes.										
15	Manado Bay	1 30	124 46	8 19	Port Townsend	165	+ 1 27	+ 1 57	−4.7	−3.3	0.73
16	Likupang River, Banka Strait	1 41	125 02	8 20	Port Townsend	165	+ 2 02	+ 2 30	−2.5	−3.0	1.10
		South.									
17	Makassar	5 09	119 22	7 57	Port Townsend	165	+ 0 08	+ 0 38	−5.1	−3.4	0.67
18	Brill or Spectacle Reef	6 05	118 54	7 56	Port Townsend	165	− 3 59	− 3 31	−7.3	−3.8	0.51
	Molukka Islands.										
19	Cajeli Bay, Bouro Island	3 19	127 04	8 28	Port Townsend	165	− 3 13	− 2 46	−4.7	−3.3	0.73
20	Amboina Bay, Amboina Island	3 41	128 07	8 32	Port Townsend	165	− 2 13	− 1 46	−1.4	−2.8	1.27
21	Wahai Bay, Ceram Island	2 46	129 31	8 38	Port Townsend	165	+ 1 16	+ 1 15	−5.7	−3.5	0.57
22	Banda Harbor, Banda Islands	4 33	129 53	8 40	Port Townsend	165	− 2 49	− 2 22	+0.1	−2.6	1.53
23	Dobbo Harbor, Arru Islands	5 45	134 16	8 57	Port Townsend	165	− 2 14	− 1 47	−3.1	−3.0	0.98
24	Sannana Bay, Xulla Besi Island	2 03	125 57	8 24	Port Townsend	165	− 2 33	− 2 06	0.0	−2.6	1.51
25	Gebi, Fow Island	0 05	129 30	8 38	Port Townsend	165	+ 0 26	+ 0 53	−4.2	−3.2	0.80
		North.									
26	Ternate	0 50	127 20	8 29	Port Townsend	165	+ 0 27	+ 0 52	−5.1	−3.4	0.67
27	Manganitu Bay, Sangir Island	3 30	125 28	8 22	Port Townsend	165	+ 0 17	+ 0 42	−3.0	−3.0	1.00
	PHILIPPINE ISLANDS.										
	Sulu Islands.						*Time meridian, 120° East.*				
28	Tataan Harbor, Tawi-tawi Island	5 11	119 56	8 00	Sydney	233	+10 18	+10 21	−0.2	+0.2	0.88
29	Port Siasi, Siasi Island	5 32	120 49	8 03	Sydney	233	+ 9 39	+ 9 40	+3.4	−0.2	2.06
30	Maibun, Jolo Island	5 56	121 02	8 04	Sydney	233	+ 9 49	+10 01	−0.5	−0.3	0.94
31	Jolo, Jolo Island	6 04	120 59	8 04	Sydney	233	+10 54	+11 07	−0.1	−0.3	1.06
32	Isabela, Basilan Island	6 42	121 58	8 08	Manila	213	− 1 55	+ 5 54	−1.3	+0.4	0.61
	Mindanao Island.										
33	Zamboanga, Basilan Strait	6 54	122 04	8 08	Sydney	233	+10 12	+10 53	−1.5	−0.2	0.62
34	Dapitan	8 40	123 26	8 14	Sydney	233	−10 51	−10 48	−0.3	+0.1	0.88
35	Oroquieta, Iligan Bay	8 29	123 48	8 15	Sydney	233	−10 01	− 9 59	−0.7	0.0	0.79
36	Misamis, Iligan Bay	8 09	123 51	8 15	Sydney	233	− 9 45	− 9 47	−0.3	+0.2	0.85
37	Iligan, Iligan Bay	8 14	124 14	8 17	Sydney	233	− 9 52	− 9 55	−0.5	+0.3	0.76
38	Agusan R. Entr., Butuan Bay	9 00	125 31	8 22	Sydney	233	−10 24	−10 26	−0.9	0.0	0.74
39	Surigao	9 48	125 29	8 22	Sydney	233	+11 31	+11 31	+0.1	0.0	1.03
40	Sigaboy, Gulf of Davao	6 39	126 04	8 24	Sydney	233	+ 9 28	+ 9 32	+0.7	0.0	1.21
41	Davao, Gulf of Davao	7 03	125 35	8 22	Sydney	233	+ 9 32	+ 9 35	+0.5	−0.2	1.21
42	Polloc, Illana Bay	7 21	124 18	8 17	Sydney	233	+ 9 47	+ 9 45	+1.2	−0.2	1.41
43	Cherif Island, Dumanquilas Bay	7 38	123 06	8 12	Sydney	233	+ 9 46	+ 9 44	+1.6	−0.2	1.53
44	Port Sibulan, Dumanquilas Bay	7 26	122 53	8 12	Sydney	233	+ 9 42	+ 9 42	+1.1	−0.2	1.38
45	Port Banga, Sibuguey Bay	7 31	122 25	8 10	Sydney	233	+ 9 45	+ 9 51	+1.5	−0.1	1.47
	Palawan Island.										
46	Secam Island, Balabac Strait	8 11	117 01	7 48	Manila	213	+ 1 29	+ 0 01	+0.5	0.0	1.11
47	Ulugan Bay	10 06	118 47	7 55	Manila	213	+ 0 01	− 0 27	+0.9	−0.2	1.25
48	Causyan or Cavern Island	11 16	119 21	7 57	Manila	213	− 0 01	− 0 29	+0.8	0.0	1.18
49	Paly or Barren Island	10 42	119 42	7 59	Manila	213	− 0 03	− 0 41	+1.2	−0.2	1.32
50	Puerto Princesa	9 41	118 42	7 55	Manila	213	+ 1 21	+ 0 43	+1.7	−0.4	1.48
51	Halsey Harbor, Culion Island	11 48	119 57	8 00	Manila	213	+ 0 04	+ 0 03	+0.5	0.0	1.11

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW. interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	[3 17]	[9 29]	7 45a	7 49b	[1.3]	.....	.....	6.6	.....	.....	7 50	6.6	2.2	3.3	1.0
2	[2 08]	[8 21]	8 10a	8 10b	[1.1]	.....	.....	5.6	.....	.....	8 12	5.5	1.9	2.8	1.0
3	[9 30]	[3 18]	15 32a	3 08a	[1.0]	.....	.....	4.9	.....	.....	.....	4.9	1.6	2.4	1.0
4	[10 20]	[4 07]	16 22a	3 57a	[1.5]	.....	.....	7.5	.....	.....	.....	7.5	2.5	3.8	1.0
5	[7 45]	[1 33]	9 24b	0 58b	[2.8]	.....	.....	7.0	.....	.....	.....	6.0	2.6	3.5	2.0
6	[5 31]	[11 44]	7 10b	11 09a	[3.9]	.....	.....	4.6	1.3	3.3	22 18	3.7	3.1	2.6	1.5
7	11 30	5 18	10 47b	5 29b	5.4	7.3	3.1	6.9	1.1	3.6	.....	3.8	3.9	4.1	1.5
8	7 00	0 47	6 17b	0 59b	5.3	7.2	3.1	7.1	1.0	3.6	.....	3.8	3.9	4.1	1.5
9	4 35	10 47	3 51b	10 59a	5.0	6.7	2.9	6.8	1.0	3.5	.....	3.6	3.7	3.9	1.5
10	4 00	10 12	3 22b	10 22a	6.7	9.0	3.9	8.7	1.2	4.0	.....	4.2	4.7	5.0	2.0
11	5 20	11 35	4 49b	11 43a	10.4	14.1	6.1	12.9	1.5	5.0	.....	5.3	6.9	7.2	2.0
12	9 35	3 23	8 47b	3 36a	4.1	5.5	2.4	5.7	0.9	3.2	.....	3.3	3.2	3.3	2.0
13	[9 19]	[3 06]	8 50b	5 44a	[1.4]	[2.0]	[0.8]	4.4	.....	.....	20 31	4.0	1.8	1.8	2.0
14	[10 31]	[4 19]	9 25b	5 35a	[2.7]	[3.7]	[1.4]	7.0	.....	.....	19 52	5.6	2.5	3.4	2.0
15	6 00	12 15	4 39b	12 24a	3.7	4.3	3.1	6.6	0.8	4.4	.....	4.5	3.4	3.9	2.0
16	6 35	0 23	5 29b	0 30b	5.6	6.4	4.7	9.0	0.9	5.5	.....	5.6	4.7	5.3	2.0
17	4 40	10 55	3 16b	11 04a	3.4	3.9	2.9	6.2	0.7	4.3	.....	4.3	3.2	3.8	1.5
18	0 33	6 46	1 29b	6 59a	1.6	1.9	1.4	3.5	0.5	2.9	19 38	3.0	1.3	2.2	1.5
19	1 20	7 32	− 0 01b	7 41a	3.7	4.2	3.1	6.6	0.8	4.4	.....	4.5	3.4	3.8	2.5
20	2 20	8 32	1 19b	8 38a	6.5	7.5	5.5	10.2	1.0	5.9	.....	6.0	5.3	6.0	2.5
21	5 50	12 00	4 18b	12 08a	2.9	3.3	2.4	5.4	0.7	3.9	.....	4.0	2.8	3.2	2.5
22	1 45	7 57	0 48b	8 03a	7.8	9.0	6.6	11.9	1.1	6.4	.....	6.6	6.1	6.8	2.5
23	2 20	8 32	1 15b	8 39a	5.0	5.7	4.2	8.4	0.9	5.2	.....	5.3	4.3	4.9	3.0
24	2 00	8 10	1 02b	8 16a	7.7	8.8	6.5	11.8	1.1	6.4	.....	6.5	6.1	6.8	2.5
25	5 00	11 12	3 47b	11 19a	4.1	4.7	3.4	7.1	0.8	4.7	.....	4.7	3.7	4.2	2.5
26	5 00	11 10	3 36b	11 18a	3.4	3.9	2.9	6.2	0.7	4.3	.....	4.3	3.2	3.7	2.5
27	4 50	11 00	3 41b	11 07a	5.1	5.8	4.3	8.5	0.9	5.2	.....	5.3	4.4	4.9	2.0
28	6 30	0 20	6 40b	11 56a	3.0	3.6	2.4	5.0	2.5	1.4	.....	2.9	2.1	2.2	2.0
29	5 54	− 0 18	5 57b	0 18b	7.0	8.6	5.4	9.0	3.4	0.5	.....	3.4	3.7	3.8	2.0
30	6 05	0 04	6 15b	11 40a	3.2	4.4	1.8	4.7	2.3	0.5	19 05	2.4	1.7	1.9	2.0
31	7 10	1 10	7 35b	11 55a	3.6	5.0	1.8	5.3	2.5	1.1	.....	2.4	1.9	2.3	2.0
32	[8 34]	[2 37]	7 47b	12 04a	[0.9]	[1.3]	[0.8]	2.7	.....	.....	20 29	2.5	1.0	1.2	2.0
33	6 32	1 00	6 37b	2 41b	2.1	2.9	0.9	3.6	2.9	0.4	19 15	2.9	1.2	1.8	2.0
34	10 25	4 15	9 32b	5 31a	3.0	3.8	1.8	4.6	3.0	1.6	.....	3.4	2.0	2.3	1.5
35	11 16	5 05	10 20b	6 15a	2.7	3.5	1.5	4.4	3.0	1.6	.....	3.4	1.8	2.1	1.5
36	11 32	5 17	10 43b	6 25a	2.9	3.7	1.7	4.8	3.0	1.6	.....	3.4	2.0	2.1	1.5
37	11 27	5 11	10 38b	6 20a	2.6	3.4	1.4	4.7	3.0	1.6	.....	3.4	2.0	2.1	1.5
38	11 00	4 45	10 10b	5 55a	2.5	3.3	1.3	4.3	2.8	1.2	.....	3.0	1.6	1.8	1.5
39	8 05	1 55	8 11b	3 03a	3.5	5.0	2.0	5.5	3.0	1.0	.....	3.2	2.2	2.5	1.5
40	6 04	12 20	5 34b	0 19a	4.1	5.6	2.2	5.1	1.4	1.0	.....	1.7	2.5	2.5	1.5
41	6 06	12 21	5 38b	0 20a	4.1	5.5	2.2	5.1	1.6	0.6	.....	1.7	2.3	2.5	2.0
42	6 16	0 01	5 44b	0 25a	4.8	6.6	2.8	5.9	2.1	0.4	.....	2.2	2.6	2.8	2.0
43	6 10	12 20	5 40b	0 20a	5.2	7.0	3.4	6.3	1.9	0.7	.....	2.0	2.8	2.9	2.0
44	6 06	12 18	5 35b	0 15a	4.7	6.4	2.7	5.6	1.6	0.6	.....	1.7	2.5	2.6	2.0
45	6 07	0 00	6 00b	0 30a	5.0	6.8	3.1	6.2	1.8	0.6	.....	1.9	2.8	2.9	2.0
46	[11 58]	[5 44]	10 50b	6 50a	[1.5]	[1.9]	[1.0]	4.9	.....	.....	.....	4.0	1.6	2.2	2.0
47	[10 30]	[4 28]	9 30b	5 30a	[1.6]	[2.1]	[1.1]	5.5	.....	.....	.....	4.2	1.8	2.4	1.5
48	[10 30]	[4 28]	9 30b	5 30a	[1.6]	[2.0]	[1.0]	5.2	.....	.....	.....	4.2	1.8	2.3	1.5
49	[10 20]	[4 20]	9 30b	5 20a	[1.7]	[2.3]	[1.2]	5.8	.....	.....	.....	4.3	1.9	2.6	1.5
50	[11 30]	[5 20]	10 50b	6 40a	[1.9]	[2.5]	[1.3]	6.5	.....	.....	.....	4.6	2.0	3.1	1.5
51	[10 40]	[4 19]	9 38b	6 05a	[1.6]	[2.3]	[0.9]	4.9	.....	.....	20 18	4.0	1.6	2.3	1.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	MALAY OR EASTERN ARCHIPELAGO—Continued.										
	PHILIPPINE ISLANDS—continued.										
	Panay and Guimaras Islands.	*North.*	*East.*				*Time meridian, 120° East.*		*Mean Lower Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	San Jose de Buenvista	10 44	121 56	8 08	Hongkong	201	+ 1 00	+ 1 06	−0.9	−0.3	0.82
2	Aclan River Entrance	11 44	122 22	8 09	Hongkong	201	+ 1 20	+ 1 28	−0.1	−0.4	1.09
3	Port Batan	11 36	122 30	8 10	Hongkong	201	+ 1 34	+ 1 36	+0.1	−0.3	1.12
4	Libas (Capiz Landing)	11 36	122 43	8 11	Hongkong	201	+ 1 32	+ 1 36	+0.1	−0.2	1.09
5	Estancia	11 28	123 09	8 13	Hongkong	201	+ 1 45	+ 1 59	+1.5	−0.1	1.48
6	Concepcion	11 13	123 06	8 12	Hongkong	201	+ 1 46	+ 2 04	+1.6	−0.2	1.55
7	Banate	11 00	122 49	8 11	Hongkong	201	+ 1 53	+ 2 18	+1.6	−0.2	1.55
8	Nabalas, Guimaras Island	10 44	122 41	8 11	Hongkong	201	+ 1 44	+ 1 58	+1.1	0.0	1.33
9	Inampulugan I., Guimaras Strait	10 27	122 43	8 11	Hongkong	201	+ 1 25	+ 1 34	−0.3	−0.3	1.00
10	Lugmayon Point, Guimaras Island	10 25	122 32	8 10	Hongkong	201	+ 1 11	+ 1 16	−0.8	−0.2	0.82
11	Iloilo	10 42	122 34	8 10	Hongkong	201	+ 1 37	+ 1 51	−0.1	−0.3	1.06
12	Miagao	10 38	122 14	8 09	Hongkong	201	+ 1 09	+ 1 21	−0.8	−0.2	0.82
	Negros Island.										
13	Cadiz Nuevo	10 57	123 19	8 13	Hongkong	201	+ 2 02	+ 2 14	+1.3	−0.2	1.45
14	Danao River Entrance	10 49	123 33	8 14	Hongkong	201	+ 1 35	+ 1 41	+0.3	−0.4	1.21
15	Bais	9 36	123 08	8 13	Sydney	233	− 9 35	− 9 34	+0.5	+0.3	1.06
16	Dumaguete	9 18	123 18	8 13	Sydney	233	−10 16	−10 12	−0.2	0.0	0.94
	Cebu Island.										
17	Moalbual	9 56	123 24	8 14	Sydney	233	− 9 37	− 9 43	+0.6	+0.4	1.06
18	Carmen	10 35	124 01	8 16	Sydney	233	− 9 30	− 9 45	+0.5	+0.3	1.06
19	Cebu	10 18	123 53	8 16	Sydney	233	− 9 46	− 9 44	+0.1	+0.2	0.97
	Bohol Island.										
20	Tubigon	9 57	123 58	8 16	Sydney	233	− 9 51	−10 12	+0.3	+0.4	0.97
21	Ubay	10 04	124 28	8 18	Sydney	233	− 9 29	−10 00	+0.3	+0.3	1.00
22	Cogton	9 50	124 31	8 18	Sydney	233	− 9 54	−10 05	−0.9	0.0	0.74
23	Garcia Hernandez	9 36	124 17	8 17	Sydney	233	− 9 59	−10 11	−0.7	+0.1	0.76
	Leyte Island.										
24	Tabogon Bay, Sogod Bay	10 11	125 07	8 20	Sydney	233	−10 22	−10 30	−0.7	+0.2	0.74
25	Maasin	10 08	124 50	8 19	Sydney	233	− 9 56	−10 08	−0.2	+0.2	0.88
26	Baybay	10 41	124 48	8 19	Sydney	233	− 9 34	− 9 56	+0.8	+0.2	1.18
27	Ormoc	11 00	124 36	8 18	Sydney	233	− 9 28	− 9 47	+0.8	+0.2	1.18
28	Palompon	11 03	124 23	8 18	Sydney	233	− 9 24	− 9 49	+0.7	+0.3	1.12
29	Poro Island, Biliran Strait	11 28	124 29	8 18	Sydney	233	− 9 30	− 9 45	+0.7	+0.3	1.12
30	Tacloban	11 15	125 00	8 20	Sydney	233	+10 21	+11 06	−2.1	−0.3	0.47
	Samar Island.										
31	Guiuan	11 02	125 44	8 23	Sydney	233	+ 9 56	+ 9 25	−1.7	−0.3	0.59
32	Santa Elena, San Juanico Strait	11 21	124 59	8 20	Sydney	233	−10 31	−10 54	−1.7	+0.2	0.44
33	Santa Rita, San Juanico Strait	11 27	124 57	8 20	Sydney	233	− 9 22	− 9 38	−0.3	+0.2	0.55
34	Catbalogan	11 47	124 52	8 19	Sydney	233	− 9 31	− 9 41	+0.4	+0.2	1.06
35	Calbayog	12 04	124 35	8 18	Sydney	233	− 9 35	− 9 41	−0.7	0.0	0.79
36	Macarite Island	12 39	124 22	8 17	Sydney	233	+ 9 01	+ 9 07	−0.9	+0.1	0.71
37	Catarman	12 31	124 39	8 19	Sydney	233	+ 9 42	+ 9 44	+0.2	0.0	1.06
38	Laoang	12 35	125 01	8 20	Sydney	233	+ 9 50	+ 9 45	+0.7	+0.2	1.15
39	Helm Harbor	12 18	125 22	8 21	Sydney	233	+ 9 42	+ 9 44	+0.9	+0.2	1.21
40	Hilaban Island	12 02	125 34	8 22	Sydney	233	+ 9 40	+ 9 42	+0.6	+0.2	1.12
41	Andis Island, Port Borongan	11 39	125 29	8 22	Sydney	233	+ 9 44	+ 9 45	+0.9	+0.2	1.21
42	Matarinao Bay	11 16	125 34	8 22	Sydney	233	+ 9 46	+ 9 43	+1.0	+0.2	1.24
	Lesser Islands.										
43	Romblon, Romblon Island	12 35	122 16	8 09	Sydney	233	− 9 58	−10 19	+0.2	+0.4	0.94
44	Pt. Concepcion, Maestre de Campo I.	12 55	121 44	8 07	Sydney	233	− 9 54	−10 16	+0.3	+0.5	0.94
45	Port Balanacan, Marinduque I.	13 32	121 52	8 07	Sydney	233	− 9 44	−10 12	0.0	+0.4	0.88
46	Santa Cruz, Marinduque Island	13 30	122 04	8 08	Sydney	233	− 9 40	−10 07	0.0	+0.4	0.88
	Mindoro Island.										
47	Port Galera	13 31	120 58	8 04	Hongkong	201	+ 1 10	+ 1 01	−1.5	−0.4	0.67
48	Calapan	13 26	121 11	8 05	Hongkong	201	+ 1 19	+ 1 11	−0.7	−0.2	0.85
49	Mangarin	12 21	121 05	8 04	Hongkong	201	+ 0 41	+ 1 01	−1.8	−0.4	0.58

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW. interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*East.* °
1	10 55	4 34	10 20*b*	5 40*a*	2.7	3.5	1.6	5.2	3.3	2.8	.....	4.0	2.1	2.4	1.5
2	11 16	4 57	10 45*b*	6 00*a*	3.6	4.7	2.0	5.9	3.4	2.4	.....	4.2	2.5	2.7	1.5
3	11 31	5 06	11 00*b*	6 10*a*	3.7	4.8	2.1	6.0	3.4	2.5	.....	4.2	2.6	2.8	1.5
4	11 30	5 07	10 58*b*	6 11*a*	3.6	4.7	2.0	6.0	3.4	2.6	.....	4.3	2.6	2.8	1.5
5	11 45	5 32	11 15*b*	6 37*a*	4.9	6.4	2.7	7.6	3.4	2.7	.....	4.3	3.4	3.6	1.5
6	11 45	5 36	11 15*b*	6 41*a*	5.1	6.6	2.8	7.6	3.4	2.6	.....	4.3	3.4	3.6	1.5
7	11 51	5 49	11 21*b*	6 54*a*	5.1	6.6	2.8	7.7	3.5	2.6	.....	4.4	3.4	3.6	1.5
8	11 42	5 29	11 10*b*	6 34*a*	4.4	5.7	2.4	7.3	3.6	2.6	.....	4.4	3.2	3.4	1.5
9	11 23	5 05	10 50*b*	6 10*a*	3.3	4.3	1.8	5.7	3.3	2.2	.....	4.0	2.4	2.6	1.5
10	11 08	4 46	10 35*b*	5 51*a*	2.7	3.5	1.6	5.1	3.3	2.1	.....	3.9	2.2	2.4	1.5
11	11 34	5 21	11 00*b*	6 26*a*	3.5	4.5	1.9	6.2	3.7	2.6	21 11	4.4	2.5	2.9	1.5
12	11 06	4 50	10 30*b*	5 55*a*	2.7	3.5	1.6	5.2	3.3	2.2	.....	4.0	2.2	2.4	1.5
13	12 02	5 47	11 30*b*	6 50*a*	4.8	6.3	2.6	7.2	3.3	2.4	.....	4.1	3.2	3.4	1.5
14	11 36	5 15	11 05*b*	6 20*a*	4.0	5.2	2.2	6.4	3.3	2.1	.....	3.9	2.7	2.9	1.5
15	11 40	5 28	11 00*b*	6 35*a*	3.6	4.7	2.0	5.9	3.2	2.1	.....	3.8	2.5	2.7	1.5
16	10 59	4 50	10 10*b*	6 00*a*	3.2	4.2	1.8	5.1	3.2	1.4	.....	3.5	2.0	2.1	1.5
17	11 39	5 20	11 00*b*	6 27*a*	3.6	4.7	2.0	6.1	3.3	2.4	.....	4.1	2.6	2.8	1.5
18	11 48	5 20	11 10*b*	6 19*a*	3.6	4.7	2.0	5.9	3.3	2.2	.....	4.0	2.5	2.7	1.5
19	11 32	5 21	10 56*b*	6 20*a*	3.3	4.5	1.7	5.7	3.3	2.2	21 19	4.0	2.3	2.6	1.5
20	11 27	4 53	10 21*b*	6 18*a*	3.3	4.3	1.9	5.7	3.3	2.0	.....	3.9	2.4	2.6	1.5
21	11 51	5 07	11 00*b*	6 20*a*	3.4	4.4	2.0	5.6	3.3	2.1	.....	3.9	2.4	2.6	1.5
22	11 26	5 02	10 35*b*	6 12*a*	2.5	3.3	1.4	4.4	2.9	1.6	.....	3.3	1.7	1.9	1.5
23	11 20	4 55	10 30*b*	6 05*a*	2.6	3.4	1.5	4.6	3.0	1.6	.....	3.4	1.8	1.9	1.5
24	11 00	4 39	10 10*b*	5 40*a*	2.5	3.3	1.5	4.6	3.0	1.8	.....	3.5	1.8	2.0	1.5
25	11 25	5 00	10 33*b*	6 01*a*	3.0	3.9	1.8	5.1	3.0	2.0	.....	3.6	2.1	2.4	1.5
26	11 47	5 12	10 55*b*	6 12*a*	4.0	5.2	2.4	6.1	3.0	2.0	.....	3.6	2.6	2.8	1.5
27	11 52	5 20	11 00*b*	6 18*a*	4.0	5.2	2.4	6.1	3.0	2.0	.....	3.6	2.6	2.8	1.5
28	11 56	5 18	11 04*b*	6 16*a*	3.8	5.0	2.1	6.2	3.1	2.1	.....	3.7	2.6	2.8	1.5
29	11 50	5 22	11 00*b*	6 20*a*	3.8	5.0	2.1	6.1	3.0	2.1	.....	3.7	2.6	2.8	1.0
30	6 53	1 25	7 06*b*	3 39*a*	1.6	2.1	1.1	2.6	2.2	0.2	19 44	2.2	0.9	1.0	1.0
31	6 31	12 12	6 36*b*	12 11*b*	2.0	2.6	1.3	2.8	1.2	0.3	.....	1.2	1.1	1.2	1.5
32	10 51	4 15	10 08*b*	5 12*a*	1.5	2.1	0.8	3.4	1.8	0.5	20 03	2.8	1.3	1.6	1.0
33	12 00	5 31	11 17*b*	6 28*a*	2.9	4.0	1.5	4.8	2.4	1.9	21 28	3.2	2.0	2.3	1.0
34	11 50	5 27	11 12*b*	6 20*a*	3.6	4.8	1.9	5.7	2.9	2.1	21 25	3.7	2.4	2.7	1.0
35	11 45	5 26	11 11*b*	6 30*a*	2.7	3.9	1.1	4.5	2.6	1.5	21 50	3.1	1.8	2.0	1.0
36	5 30	11 48	4 57*b*	11 53*b*	2.4	3.2	1.7	3.3	0.5	1.5	.....	1.6	1.7	1.9	1.0
37	6 13	0 02	5 38*b*	0 02*a*	3.6	4.8	2.4	4.4	0.6	1.5	.....	1.6	2.2	2.5	1.0
38	6 22	0 04	5 46*b*	0 03*a*	3.9	5.1	2.7	4.8	0.6	1.6	.....	1.7	2.5	2.7	1.0
39	6 15	0 04	6 00*b*	0 03*a*	4.1	5.3	2.8	5.0	0.6	1.7	.....	1.8	2.6	2.8	1.0
40	6 14	0 03	6 00*b*	0 02*a*	3.8	5.0	2.6	4.9	0.7	1.7	.....	1.8	2.5	2.7	1.0
41	6 18	0 06	6 04*b*	0 05*a*	4.1	5.3	2.8	5.2	0.8	1.6	.....	1.8	2.6	2.8	1.0
42	6 20	0 04	6 10*b*	0 03*a*	4.2	5.4	2.9	5.5	0.9	1.5	.....	1.7	2.7	2.8	1.0
43	11 13	4 39	10 46*b*	5 39*a*	3.2	4.2	1.9	5.6	3.0	1.9	.....	3.6	2.4	2.6	1.0
44	11 15	4 40	10 48*b*	5 40*a*	3.2	4.2	1.9	5.7	3.0	1.9	.....	3.6	2.5	2.7	1.0
45	11 25	4 44	10 40*b*	5 44*a*	3.0	3.9	1.8	5.5	2.8	2.0	.....	3.4	2.3	2.6	1.0
46	11 30	4 50	10 45*b*	5 50*a*	3.0	3.9	1.8	5.6	2.7	1.9	.....	3.3	2.3	2.6	1.0
47	11 01	4 25	10 13*b*	5 49*a*	2.2	2.8	1.3	4.6	2.8	2.0	.....	3.5	1.8	2.1	1.0
48	11 11	4 36	10 26*b*	5 56*a*	2.8	3.6	1.7	5.3	2.9	2.1	.....	3.6	2.2	2.5	1.0
49	10 32	4 25	10 01*b*	6 26*a*	1.9	2.6	1.1	4.3	2.8	2.0	.....	3.4	1.6	1.9	1.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	MALAY OR EASTERN ARCHIPELAGO—Continued.										
	PHILIPPINE ISLANDS—continued.										
	Luzon Island—west coast.	*North.*	*East.*				*Time meridian, 120° East.*		*Mean Lower Low Water.*		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Corregidor Island, Manila Bay	14 23	120 36	8 02	Manila	213	−0 22	− 0 09	0.0	0.0	1.00
2	Manila, Pasig River Entrance	14 36	120 57	8 04	Manila	213	0 00	0 00	0.0	0.0	1.00
3	Olongapo, Subic Bay	14 49	120 17	8 01	Manila	213	−0 27	− 0 11	−0.3	+0.1	0.91
4	Port Silanguin	14 46	120 07	8 00	Manila	213	−0 29	− 0 12	−0.3	+0.2	0.89
5	Port Masinloc	15 31	119 55	8 00	Manila	213	−0 34	− 0 17	−0.4	+0.2	0.86
6	Santa Cruz, Zambales	15 46	119 54	8 00	Manila	213	−0 38	− 0 22	−0.7	+0.1	0.82
7	Bolinao, Lingayen Gulf	16 24	119 54	8 00	Manila	213	−0 54	− 0 27	−1.1	+0.1	0.73
8	Sual, Lingayen Gulf	16 04	120 06	8 00	Manila	213	−0 44	− 0 17	−0.7	+0.1	0.82
9	Santo Tomas, Lingayen Gulf	16 17	120 23	8 02	Manila	213	−0 56	− 0 24	−0.9	+0.2	0.75
10	San Fernando	16 37	120 18	8 01	Manila	213	−1 05	− 0 33	−1.1	+0.1	0.73
11	Solvec Cove	17 27	120 28	8 02	Manila	213	−1 21	− 0 54	−1.3	0.0	0.70
12	Salomague	17 47	120 25	8 02	Manila	213	−1 36	− 1 09	−1.3	+0.1	0.68
13	Laoag River Entrance	18 13	120 31	8 02	Manila	213	−1 46	− 1 39	−1.5	0.0	0.66
	Luzon Island—north coast.										
14	Aparri, Cagayan River	18 22	121 38	8 07	Apia	221	−0 54	− 0 46	+0.1	0.0	1.04
15	Camalaniugan, Cagayan River	18 17	121 41	8 07	Apia	221	−0 44	− 0 37	+0.1	0.0	1.04
16	Port San Pio V, Camiguin Island	18 55	121 50	8 07	Nagasaki	185	−2 16	− 2 20	−3.3	−0.6	0.56
	Luzon Island—east coast.										
17	Port Dimalansan :	17 20	122 22	8 09	Nagasaki	185	−2 23	− 2 35	−3.2	−0.6	0.58
18	Casiguran Sound	16 05	122 02	8 08	Nagasaki	185	−2 22	− 2 34	−3.1	−0.6	0.60
19	Hook Bay, Polillo Island	14 57	121 50	8 07	Nagasaki	185	−2 21	− 2 32	−3.0	−0.6	0.61
20	Polillo, Polillo Island	14 43	121 56	8 08	Nagasaki	185	−2 21	− 2 32	−2.7	−0.6	0.66
21	Port Lampon, Lamon Bay	14 40	121 37	8 06	Nagasaki	185	−2 07	− 2 17	−2.6	−0.6	0.68
22	Sangirin, Alabat I., Lamon Bay	14 12	121 55	8 08	Nagasaki	185	−2 15	− 2 27	−2.3	−0.6	0.73
23	Atimonan, Lamon Bay	14 00	121 55	8 08	Nagasaki	185	−2 07	− 2 19	−2.3	−0.6	0.73
24	Apat Bay, Lamon Bay	14 02	122 19	8 09	Nagasaki	185	−2 06	− 2 18	−2.3	−0.6	0.73
25	Capalonga	14 20	122 29	8 10	Nagasaki	185	−2 12	− 2 26	−2.7	−0.6	0.66
26	Mambulao	14 18	122 41	8 11	Nagasaki	185	−2 10	− 2 21	−2.6	−0.6	0.68
27	Guintinua Island, Calagua Islands	14 25	122 56	8 12	Nagasaki	185	−2 23	− 2 27	−2.7	−0.6	0.66
28	Mercedes	14 07	123 00	8 12	Nagasaki	185	−2 05	− 2 14	−2.8	−0.6	0.65
29	Cabgan Island, San Miguel Bay	13 46	123 16	8 13	Nagasaki	185	−2 06	− 2 12	−1.6	−0.4	0.81
30	Sisiran Bay	13 56	123 39	8 15	Nagasaki	185	−2 08	− 2 11	−2.8	−0.6	0.65
31	Hitoma, Catanduanes Island	13 47	124 08	8 17	Nagasaki	185	−2 13	− 2 19	−2.8	−0.6	0.65
32	Port Anajao, Catanduanes Island	13 57	124 20	8 17	Nagasaki	185	−2 17	− 2 23	−2.9	−0.6	0.63
33	Tabaco, Tabaco Bay	13 22	123 44	8 15	Nagasaki	185	−2 26	− 2 31	−2.9	−0.6	0.63
34	Legaspi, Albay Gulf	13 09	123 45	8 15	Nagasaki	185	−2 30	− 2 36	−2.6	−0.6	0.68
35	Gubat	12 55	124 08	8 17	Nagasaki	185	−2 42	− 2 48	−3.0	−0.6	0.61
36	San Bernardino Island	12 45	124 17	8 17	Sydney	233	+9 04	+ 9 06	−0.7	+0.1	0.76
	Luzon Island—south coast.										
37	Sorsogon	12 58	124 00	8 16	Sydney	233	−9 08	− 9 25	0.0	+0.4	0.88
38	Pasacao, Ragay Gulf	13 30	123 02	8 12	Sydney	233	−9 44	−10 01	+0.1	+0.3	0.94
39	Guinayangan, Ragay Gulf	13 53	122 27	8 10	Sydney	233	−9 12	− 9 19	+0.6	+0.4	1.06
40	Aguasa Bay	13 17	122 31	8 10	Sydney	233	−9 40	− 9 58	+0.4	+0.4	1.00
41	Catanauan	13 36	122 19	8 09	Sydney	233	−9 36	− 9 48	+0.3	+0.4	0.97
42	Pitogo	13 47	122 05	8 08	Sydney	233	−9 49	−10 10	−0.1	+0.4	0.85
43	Lucena Light, Tayabas Bay	13 54	121 36	8 06	Sydney	233	−9 33	− 9 51	0.0	+0.4	0.88
44	Anilao, Balayan Bay	13 46	120 55	8 04	Hongkong	201	+1 12	+ 0 53	−1.7	−0.4	0.61

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*East.* °
1	[10 22]	[3 56]	9 14*b*	5 55*a*	[1.2]	[1.6]	[0.8]	4.4	.....	.....	20 50	3.9	1.4	2.0	1.0
2	[10 42]	[4 13]	9 38*b*	6 06*a*	[1.4]	[1.8]	[0.9]	4.4	.....	.....	20 41	3.9	1.4	2.0	1.0
3	[10 07]	[3 55]	9 08*b*	5 52*a*	[1.2]	[1.6]	[0.8]	4.0	.....	.....	20 18	3.5	1.3	1.8	1.0
4	[10 06]	[3 54]	9 05*b*	5 50*a*	[1.2]	[1.6]	[0.8]	3.9	.....	.....	.....	3.5	1.3	1.8	1.0
5	[10 00]	[3 50]	9 00*b*	5 45*a*	[1.2]	[1.6]	[0.8]	3.8	.....	.....	.....	3.5	1.3	1.8	1.0
6	[9 56]	[3 40]	8 56*b*	5 40*a*	[1.1]	[1.4]	[0.8]	3.6	.....	.....	20 05	3.3	1.1	1.7	0.5
7	[9 50]	[3 35]	8 40*b*	5 35*a*	[0.9]	[1.2]	[0.6]	3.2	.....	.....	20 08	2.9	0.9	1.5	0.5
8	[10 10]	[3 50]	8 50*b*	5 45*a*	[1.1]	[1.4]	[0.8]	3.6	.....	.....	20 29	3.3	1.1	1.7	0.5
9	[10 00]	[3 45]	8 40*b*	5 40*a*	[1.0]	[1.3]	[0.7]	3.3	.....	.....	.....	3.1	1.0	1.6	0.5
10	[9 45]	[3 30]	8 30*b*	5 30*a*	[0.9]	[1.2]	[0.6]	3.2	.....	.....	.....	2.9	0.9	1.5	0.5
11	[9 20]	[3 10]	8 15*b*	5 10*a*	[0.8]	[1.1]	[0.6]	3.1	.....	.....	.....	2.8	0.8	1.4	0.5
12	[9 05]	[2 55]	8 00*b*	4 55*a*	[0.8]	[1.0]	[0.6]	3.0	.....	.....	.....	2.8	0.8	1.3	0.5
13	[8 50]	[2 40]	7 50*b*	4 25*a*	[0.7]	[0.9]	[0.5]	2.9	.....	.....	.....	2.8	0.7	1.2	0.0
14	6 18	0 13	5 32*b*	0 42*a*	2.7	3.2	2.0	3.8	0.6	1.2	.....	1.8	1.6	1.9	0.0
15	6 29	0 23	5 43*b*	0 52*a*	2.7	3.3	2.0	3.9	0.6	1.3	.....	1.4	1.7	2.0	0.0
16	6 00	12 13	5 15*b*	12 22*b*	3.5	4.6	2.4	5.0	0.6	1.4	.....	1.5	2.2	2.6	0.5
17	5 55	12 00	5 15*b*	12 09*b*	3.6	4.7	2.5	4.5	0.6	1.5	.....	1.6	2.3	2.6	0.5
18	5 55	12 00	5 15*b*	12 09*b*	3.7	4.8	2.6	4.6	0.6	1.5	.....	1.6	2.4	2.6	0.5
19	5 55	12 01	5 16*b*	12 10*b*	3.8	4.9	2.7	4.7	0.6	1.6	.....	1.7	2.4	2.6	0.5
20	5 56	12 02	5 18*b*	12 11*b*	4.1	5.3	2.9	5.0	0.6	1.6	.....	1.7	2.6	2.8	0.5
21	6 08	12 15	5 33*b*	12 24*b*	4.2	5.4	2.9	5.1	0.6	1.6	.....	1.7	2.6	2.8	0.5
22	6 02	12 07	5 30*b*	12 16*b*	4.5	5.7	3.1	5.3	0.6	1.7	.....	1.8	2.7	2.9	1.0
23	6 10	12 15	5 40*b*	12 24*b*	4.5	5.7	3.1	5.4	0.6	1.7	.....	1.8	2.7	3.0	1.0
24	6 12	12 17	5 42*b*	0 01*a*	4.5	5.7	3.1	5.4	0.6	1.7	.....	1.8	2.7	3.0	1.0
25	6 07	12 10	5 37*b*	12 19*b*	4.1	5.3	2.9	5.1	0.6	1.7	.....	1.8	2.6	2.8	1.0
26	6 10	12 16	5 40*b*	0 00*a*	4.2	5.4	2.9	5.1	0.6	1.7	.....	1.8	2.6	2.8	1.0
27	5 58	12 11	5 28*b*	12 20*b*	4.1	5.3	2.9	5.1	0.6	1.8	.....	1.9	2.6	2.8	1.0
28	6 16	12 24	5 46*b*	0 08*a*	4.0	5.2	2.8	5.1	0.7	1.8	.....	1.9	2.5	2.8	1.0
29	6 16	0 02	5 46*b*	0 11*a*	5.0	6.5	3.5	6.2	0.7	1.8	.....	1.9	3.2	3.4	1.0
30	6 16	0 05	5 46*b*	0 14*a*	4.0	5.2	2.8	5.1	0.7	1.8	.....	1.9	2.5	2.8	1.0
31	6 13	12 24	5 43*b*	0 08*a*	4.0	5.2	2.7	5.1	0.7	1.8	.....	1.9	2.5	2.8	1.0
32	6 09	12 20	5 39*b*	0 04*a*	3.9	5.1	2.6	5.0	0.7	1.8	.....	1.9	2.5	2.8	1.0
33	5 58	12 10	5 28*b*	12 19*b*	3.9	5.1	2.5	5.0	0.7	1.8	13 27	1.9	2.5	2.8	1.0
34	5 54	12 05	5 24*b*	12 12*b*	4.2	5.4	2.8	5.3	0.7	1.8	.....	1.9	2.6	2.9	1.0
35	5 44	11 55	5 14*b*	12 00*b*	3.8	4.9	2.5	4.7	0.6	1.7	.....	1.8	2.4	2.6	1.0
36	5 33	11 47	5 00*b*	11 52*b*	2.6	3.4	1.8	3.6	0.6	1.6	.....	1.7	1.8	2.0	1.0
37	12 10	5 40	11 06*b*	6 54*a*	3.0	4.0	1.8	5.5	2.5	1.8	.....	3.1	2.3	2.6	1.0
38	11 30	5 00	10 25*b*	6 00*a*	3.2	4.3	2.0	5.5	2.6	1.9	.....	3.2	2.3	2.6	1.0
39	12 00	5 40	10 55*b*	6 40*a*	3.6	4.8	2.2	6.1	2.6	1.9	.....	3.2	2.6	2.9	1.0
40	11 32	5 01	10 45*b*	5 55*a*	3.4	4.4	2.0	6.0	2.7	1.9	.....	3.3	2.5	2.8	1.0
41	11 35	5 10	10 50*b*	6 10*a*	3.3	4.3	2.0	5.9	2.7	1.9	.....	3.3	2.5	2.8	1.0
42	11 21	4 47	10 36*b*	5 47*a*	2.9	3.8	1.7	5.4	2.8	2.0	.....	3.4	2.2	2.5	1.0
43	11 35	5 04	10 51*b*	6 06*a*	3.0	3.9	1.8	5.4	2.8	2.0	.....	3.4	2.3	2.5	1.0
44	11 03	4 17	10 14*b*	5 55*a*	2.0	2.6	1.3	4.3	2.8	2.0	.....	3.4	1.7	2.0	1.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	POLYNESIA.										
	NORTH PACIFIC GROUPS.										
	Bonin or Arzobispo Islands.	*North.*	*East.*				*Local time.*		*Mean Lower Low Water.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Newport, Hillsboro Island	26 36	142 09	9 29	Honolulu	217	+ 6 59	+ 6 57	+1.1	+0.1	1.87
2	Port Lloyd, Peel Island	27 05	142 12	9 29	Honolulu	217	+ 1 39	+ 1 42	+0.9	+0.1	1.61
	Marianas.										
3	Guam or Guajan Island	13 26	144 39	9 39	Honolulu	217	+ 2 49	+ 3 02	+0.9	+0.1	1.70
4	Saipan Island	15 19	145 44	9 43	Honolulu	217	+ 2 29	+ 2 32	+0.5	+0.1	1.36
	Caroline Islands.										
5	Tomil Bay, Yap or Uap Island	9 30	138 05	9 12	Honolulu	217	+ 2 45	+ 2 43	+1.6	0.0	2.29
6	Kiti Harbor, Ponapi Island	6 47	158 08	10 33	Honolulu	217	− 0 33	− 0 30	+2.4	+0.2	2.88
7	Kusaie or Ualan Island	5 20	163 05	10 52	Honolulu	217	+ 1 26	+ 1 29	+1.7	+0.1	2.37
	Marshall Islands.										
8	Kivajalein Island	8 40	167 45	11 11	Honolulu	217	− 0 34	− 0 31	+2.7	+0.4	2.97
9	Ebon Atoll, or Boston Island	4 35	168 40	11 15	Honolulu	217	+ 0 10	+ 0 13	+3.1	+0.5	3.22
10	Ailuk Island	10 25	170 00	11 20	Honolulu	217	+ 0 15	+ 0 13	+4.3	+0.5	4.24
11	Port Rhin, Mulgrave Islands	6 14	171 45	11 27	Honolulu	217	+ 0 25	+ 0 28	+3.3	+0.5	3.39
	Gilbert Islands.										
12	Apamama or Hopper Island	0 30	173 55	11 36	Honolulu	217	− 0 05	− 0 02	+3.1	+0.5	3.22
13	Apaiang or Charlotte Island	1 50	172 50	11 31	Honolulu	217	+ 0 10	+ 0 13	+3.1	+0.5	3.22
	Detached islands.		*West.*								
14	Midway Islands	28 13	177 21	11 49	Honolulu	217	− 0 41	− 0 15	−0.2	+0.1	0.76
15	Howland Island	0 53	176 35	11 46	Honolulu	217	+ 3 23	+ 3 26	+4.3	+0.5	4.24
16	Palmyra Island	5 50	162 10	10 49	Honolulu	217	+ 1 37	+ 1 40	+0.2	+0.2	1.02
17	Fanning Island	3 50	159 20	10 37	Honolulu	217	+ 2 11	+ 2 14	+1.0	+0.3	1.61
18	Christmas Island	1 55	157 20	10 29	Honolulu	217	+ 0 36	+ 0 37	+1.0	+0.3	1.61
	Hawaiian Islands.						*Time meridian, 157° 30′ W.*				
19	Eleele, Hanapepe Bay, Kauai I	21 54	159 35	10 38	Honolulu	217	− 0 51	+ 1 28	−0.2	0.0	0.83
20	HONOLULU, Oahu Island	21 18	157 52	10 31	Honolulu	217	0 00	0 00	0.0	0.0	1.00
21	Kaunakakai, Molokai Island	21 05	157 02	10 28	Honolulu	217	− 1 13	− 1 07	+0.5	+0.1	1.36
22	Kahului, Maui Island	20 54	156 29	10 26	Honolulu	217	− 1 45	− 1 45	+0.6	+0.2	1.44
23	Kihei, Maalaea B., Maui Island	20 47	156 28	10 26	Honolulu	217	− 0 10	− 0 27	+0.5	+0.1	1.36
24	Lahaina, Maui Island	20 50	156 40	10 27	Honolulu	217	− 0 20	− 0 06	+0.7	+0.2	1.44
25	Mahukona, Hawaii Island	20 11	155 54	10 24	Honolulu	217	− 0 35	− 0 22	+0.3	+0.1	1.17
26	Kealakekua, Hawaii Island	19 28	155 56	10 24	Honolulu	217	− 0 45	− 0 47	+0.1	0.0	1.10
27	Hilo, Hawaii Island	19 44	155 05	10 20	Honolulu	217	− 0 50	− 1 05	+0.8	+0.2	1.53

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW. interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	11 30	5 15	11 39*a*	4 18*a*	2.2	2.8	1.6	3.6	2.0	0.4	.....	2.0	2.4	1.4	1.5
2	6 10	0 00	6 20*a*	— 1 03*a*	1.9	2.4	1.4	3.1	1.9	0.4	.....	1.9	2.1	1.2	1.5
															East.
3	7 20	1 20	7 30*a*	0 22*a*	2.0	2.6	1.5	3.6	3.0	0.5	.....	3.1	2.4	1.5	2.5
4	7 00	0 50	7 11*a*	— 0 17*a*	1.6	2.0	1.1	2.6	1.7	0.3	.....	1.7	1.8	1.0	2.5
5	7 15	1 00	7 24*a*	0 06*a*	2.7	3.4	1.9	4.0	2.2	0.4	.....	2.3	2.8	1.6	2.0
6	4 00	10 15	4 07*a*	9 28*b*	3.4	4.3	2.4	4.9	2.5	0.5	.....	2.5	3.3	2.1	6.5
7	6 00	12 15	6 08*a*	11 23*b*	2.8	3.5	2.0	4.2	2.3	0.4	.....	2.3	2.8	1.7	7.5
8	4 00	10 15	4 08*a*	9 29*b*	3.5	4.4	2.5	5.0	2.5	0.5	.....	2.6	2.3	2.1	8.0
9	4 45	11 00	4 52*a*	10 15*b*	3.8	4.7	2.7	5.4	2.6	0.5	.....	2.7	2.5	2.3	8.5
10	4 50	11 00	4 56*a*	10 21*b*	5.0	6.2	3.6	6.8	3.0	0.6	.....	3.1	3.1	2.9	8.5
11	5 00	11 15	5 07*a*	10 32*b*	4.0	5.0	2.8	5.6	2.7	0.5	.....	2.7	2.6	2.4	8.5
12	4 30	10 45	4 37*a*	10 00*b*	3.8	4.7	2.7	5.4	2.6	0.5	.....	2.7	2.5	2.3	9.0
13	4 45	11 00	4 52*a*	10 15*b*	3.8	4.7	2.7	5.4	2.6	0.5	.....	2.7	2.5	2.3	9.0
14	3 05	9 43	2 31*a*	8 58*b*	0.9	1.1	0.6	1.4	0.1	0.8	.....	0.8	0.7	0.9	10.5
15	7 10	1 00	7 16*a*	0 21*a*	5.0	6.2	3.6	6.8	3.0	0.6	.....	3.1	3.1	2.9	8.5
16	5 25	11 40	5 37*a*	10 21*b*	1.2	1.5	0.9	2.1	1.5	0.3	.....	1.5	0.9	0.8	8.0
17	6 00	12 15	6 10*a*	11 12*b*	1.9	2.4	1.4	3.1	1.9	0.4	.....	1.9	1.4	1.2	7.5
18	4 25	10 38	4 35*a*	9 35*b*	1.9	2.4	1.4	3.1	1.9	0.4	.....	1.9	1.4	1.2	7.0
19	2 50	11 21	3 01*a*	10 00*b*	1.0	1.3	0.7	1.8	1.3	0.3	.....	1.3	0.6	0.7	10.5
20	3 48	10 00	4 00*a*	8 38*b*	1.2	1.5	0.8	2.0	1.5	0.3	4 31	1.5	0.7	0.8	10.5
21	2 38	8 56	2 49*a*	7 49*b*	1.6	2.1	1.1	2.5	1.8	0.3	.....	1.8	1.0	1.1	10.0
22	2 08	8 20	2 18*a*	7 18*b*	1.7	2.2	1.2	2.6	1.9	0.4	.....	1.9	1.1	1.2	10.0
23	3 43	9 38	3 53*a*	8 36*b*	1.6	2.1	1.1	2.5	1.8	0.3	.....	1.8	1.0	1.1	10.0
24	3 32	9 58	3 32*a*	8 56*b*	1.7	2.2	1.2	2.6	1.9	0.4	.....	1.9	1.1	1.2	10.0
25	3 20	9 45	3 30*a*	8 43*b*	1.4	1.8	0.9	2.3	1.6	0.4	.....	1.6	0.9	1.0	10.0
26	3 10	9 20	3 20*a*	8 18*b*	1.3	1.6	0.9	2.2	1.5	0.3	.....	1.5	0.8	0.9	10.0
27	3 09	9 06	3 20*a*	8 04*b*	1.8	2.3	1.3	2.7	2.0	0.4	.....	2.0	1.2	1.2	10.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	POLYNESIA—Continued.										
	SOUTH PACIFIC GROUPS.										
	Detached islands.	*South.*	*West.*				*Local time.*		*Mean Low Water Springs.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Sala y Gomez Island	26 19	105 26	7 02	Apia	221	+ 9 51	+ 9 54	0.0	0.0	1.02
2	Easter Island	27 10	109 21	7 17	Apia	221	+ 6 32	+ 6 33	−0.4	0.0	0.88
3	Rapa or Oparo Island	27 37	144 19	9 37	Apia	221	+ 6 06	+ 6 09	−0.8	0.0	0.73
4	Caroline Atoll	10 00	150 15	10 01	Apia	221	+ 9 57	+ 9 59	−1.8	−0.2	0.35
5	Tonga-rewa or Penrhyn Island	9 00	157 55	10 32	Apia	221	− 0 27	− 0 24	−1.5	−0.1	0.46
6	Suvarof Island	13 13	163 12	10 53	Apia	221	+ 9 09	+ 9 10	−0.8	0.0	0.73
7	Uea, Uvea, or Wallis Island	13 24	176 08	11 45	Apia	221	+ 0 16	+ 0 17	+1.1	+0.1	1.38
	Tuamotu or Low Archipelago.										
8	Gambier or Mangareva Island	23 05	135 00	9 00	Apia	221	− 4 40	− 4 39	−0.5	0.0	0.73
9	Bow, Harpe, or Hao Island	18 20	140 45	9 23	Apia	221	− 3 49	− 3 46	−0.8	0.0	0.73
10	Nairsa or Rangiroa Island	14 58	147 52	9 51	Apia	221	− 1 58	− 1 57	−1.0	−0.2	0.65
	Marquesas Islands.										
11	Santa Christina or Taou-ata Island	9 55	139 08	9 17	Apia	221	− 3 59	− 3 56	0.0	0.0	0.96
12	Tai-o-hae B., Nouka Hiva Island	8 52	140 00	9 20	Apia	221	− 2 39	− 2 36	+0.3	+0.1	1.08
	Society Islands.										
13	Tahiti or Otaheite Island	17 30	149 30	9 58	Apia	221	− 6 53	− 6 52	−2.0	−0.2	0.31
14	Borabora or Bolabola Island	16 30	151 45	10 07	Apia	221	− 6 43	− 6 40	−1.6	−0.2	0.42
	Tubuai or Austral Islands.										
15	Tubuai Island	23 25	149 33	9 58	Apia	221	− 3 28	− 3 27	−0.8	0.0	0.73
	Cook or Hervey Islands.										
16	Rarotonga Island	21 15	159 40	10 39	Apia	221	− 0 27	− 0 24	−0.4	0.0	0.85
	Phœnix Islands.										
17	Enderbury Island	3 09	171 11	11 25	Apia	221	− 1 25	− 1 22	+1.2	+0.2	1.42
	Tokelau or Union Islands.										
18	Fakaofu or Bowditch Island	9 25	171 15	11 25	Apia	221	− 0 25	− 0 24	−0.8	0.0	0.73
	Samoa or Navigator Islands.										
19	APIA, Upolu Island	13 50	171 44	11 27	Apia	221	0 00	0 00	0.0	0.0	1.00
20	Pago Pago, Tutuila Island	14 17	170 42	11 23	Apia	221	+ 0 35	+ 0 33	−0.4	0.0	0.85
21	Manua Island	14 15	169 30	11 18	Apia	221	− 0 25	− 0 24	+1.2	+0.2	1.42
	Tonga or Friendly Islands.										
22	Vavau Island	18 34	173 58	11 36	Apia	221	− 0 05	− 0 02	+0.6	0.0	1.19
23	Namuka Island	20 15	174 46	11 39	Apia	221	+ 1 25	+ 1 23	0.0	0.0	1.00
24	Tongatabu Harbor	21 00	175 10	11 41	Apia	221	− 0 05	− 0 02	+0.6	0.0	1.19
	Fiji Islands.		*East.*								
25	Vatoa or Turtle Island	19 49	181 46	12 07	Apia	221	− 1 04	− 1 01	0.0	0.0	0.96
26	Mango Island	17 25	180 50	12 03	Apia	221	− 1 04	− 1 01	0.0	0.0	0.96
27	Totoya Island	18 56	180 10	12 01	Apia	221	− 0 39	− 0 41	+0.3	+0.1	1.08
28	Savu Savu Bay, Vanua Levu Island	16 43	179 15	11 57	Apia	221	− 1 14	− 1 13	+1.0	+0.2	1.35
29	Suva Harbor, Viti Levu Island	18 08	178 26	11 54	Apia	221	− 0 44	− 0 46	+0.4	0.0	1.12
30	Ngaloa Bay, Kandavu Island	19 02	178 15	11 53	Apia	221	− 0 34	− 0 36	+0.7	+0.1	1.23
	Detached islands.										
31	Rotumah Island	12 30	177 02	11 48	Apia	221	− 0 58	− 1 00	+0.9	+0.1	1.31
32	North Minerva Reef	23 36	181 06	12 04	Apia	221	+ 0 36	+ 0 34	+2.2	+0.2	1.73
	Kermadec Islands.										
33	Raoul or Sunday Island	29 13	182 15	12 09	Auckland	229	+11 22	+11 37	−5.2	−0.6	0.39

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
															° East.
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	°
1	4 00	10 15	3 59a	10 25b	2.7	3.3	2.0	2.8	0.4	0.1	.....	0.4	1.6	1.3	16.5
2	0 40	6 53	0 38a	7 04b	2.3	2.8	1.7	2.4	0.4	0.1	.....	0.4	1.4	1.1	16.0
3	0 10	6 25	0 09a	6 35b	1.9	2.4	1.4	1.9	0.3	0.1	.....	0.3	1.2	0.9	11.0
4	4 00	10 14	3 58a	10 28b	0.9	1.1	0.7	0.9	0.2	0.0	.....	0.2	0.6	0.9	8.0
5	6 00	12 15	5 58a	12 31b	1.2	1.5	0.9	1.2	0.3	0.0	.....	0.3	0.8	0.5	8.0
6	3 10	9 23	3 09a	9 33b	1.9	2.4	1.4	1.9	0.3	0.1	.....	0.3	1.2	0.9	9.0
7	6 40	0 28	6 39a	0 35a	3.6	4.4	2.7	3.7	0.4	0.1	.....	0.4	2.2	1.7	9.5
8	1 50	8 08	1 49b	8 13b	1.9	2.4	1.4	1.9	0.3	0.1	.....	0.3	1.2	0.9	10.5
9	2 40	8 55	2 39b	9 05b	1.9	2.4	1.4	1.9	0.3	0.1	.....	0.3	1.2	0.9	9.5
10	4 30	10 43	4 38b	10 55b	1.7	2.1	1.3	1.7	0.3	0.1	.....	0.3	1.0	0.8	9.0
11	2 30	8 45	2 29b	8 55b	2.5	3.1	1.9	2.6	0.4	0.1	.....	0.4	1.6	1.2	8.0
12	3 50	10 05	3 49b	10 14b	2.8	3.5	2.1	2.9	0.4	0.1	.....	0.4	1.8	1.4	8.0
13	12 00	5 48	11 58a	6 04b	0.8	1.0	0.6	0.8	0.2	0.0	.....	0.2	0.5	0.3	9.5
14	12 10	6 00	12 08a	6 12b	1.1	1.4	0.8	1.1	0.2	0.0	.....	0.2	0.7	0.5	9.0
15	3 00	9 13	2 59b	9 23b	1.9	2.4	1.4	1.9	0.3	0.1	.....	0.3	1.2	0.9	10.0
16	6 00	12 15	5 59b	12 24b	2.2	2.7	1.7	2.2	0.3	0.1	.....	0.3	1.4	1.1	10.0
17	5 00	11 15	4 59b	11 22b	3.7	4.6	2.7	3.8	0.4	0.1	.....	0.4	2.3	1.8	8.5
18	6 00	12 13	5 59b	12 23b	1.9	2.4	1.4	1.9	0.3	0.1	.....	0.3	1.2	0.9	9.0
19	6 25	0 12	6 22b	0 20a	2.6	3.2	2.0	2.7	0.3	0.1	17 10	0.3	1.6	1.3	9.5
20	7 00	0 45	6 59b	0 54a	2.2	2.7	1.6	2.2	0.3	0.1	.....	0.3	1.4	1.1	9.5
21	6 00	12 18	5 59b	12 20b	3.7	4.6	2.7	3.7	0.4	0.1	.....	0.4	2.3	1.8	9.5
22	6 20	0 10	6 19b	0 18a	3.1	3.8	2.3	3.1	0.4	0.1	.....	0.4	1.9	1.5	10.0
23	7 50	1 35	7 49b	1 45a	2.6	3.2	2.0	2.6	0.4	0.1	.....	0.4	1.6	1.3	10.5
24	6 20	0 10	6 19b	0 18a	3.1	3.8	2.3	3.1	0.4	0.1	.....	0.4	1.9	1.5	11.0
25	6 10	0 00	6 09b	0 10a	2.5	3.1	1.9	2.5	0.4	0.1	.....	0.4	1.6	1.2	10.5
26	6 10	0 00	6 09b	0 10a	2.5	3.1	1.9	2.5	0.4	0.1	.....	0.4	1.6	1.2	10.0
27	6 35	0 20	6 34b	0 29a	2.8	3.5	2.1	2.8	0.4	0.1	.....	0.4	1.8	1.4	10.5
28	6 00	12 13	5 59b	12 20b	3.5	4.3	2.6	3.5	0.4	0.1	.....	0.4	2.2	1.7	10.0
29	6 30	0 15	6 29b	0 24a	2.9	3.6	2.2	2.9	0.4	0.1	.....	0.4	1.8	1.4	10.5
30	6 40	0 25	6 39b	0 33a	3.2	4.0	2.4	3.2	0.4	0.1	.....	0.4	2.0	1.6	10.5
31	6 15	0 00	6 14b	0 08a	3.4	4.2	2.5	3.5	0.4	0.1	.....	0.4	2.1	1.7	9.5
32	7 50	1 35	7 49b	1 42a	4.5	5.5	3.3	4.6	0.5	0.1	.....	0.5	2.8	2.2	11.5
33	6 00	12 13	6 02b	12 09b	3.0	3.3	2.7	3.3	0.3	0.2	.....	0.3	1.6	1.6	12.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	AUSTRALASIA.										
	NEW ZEALAND.						*Time meridian, 172° 30′ East.*		*Mean Low Water Springs.*		
	Stewart Island.	*South.*	*East.*								
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Port Adventure	47 04	168 12	11 13	Auckland	229	+5 40	+6 00	−0.9	−0.1	0.90
2	Port Pegasus	47 13	167 43	11 11	Auckland	229	+5 05	+5 20	−0.8	−0.2	0.92
3	Mason Bay	46 56	167 45	11 11	Auckland	229	−5 30	−5 20	−1.1	−0.3	0.90
4	Paterson Inlet	46 57	168 09	11 13	Auckland	229	−5 40	−5 30	−0.9	−0.2	0.91
	South Island.										
5	Akaroa Harbor	43 45	172 46	11 31	Auckland	229	−3 40	−2 55	−1.3	−0.2	0.86
6	Timaru	44 23	171 18	11 25	Auckland	229	−3 20	−3 20	−2.3	−0.4	0.75
7	Oamaru	45 06	171 01	11 24	Auckland	229	−3 45	−3 15	−2.7	−0.4	0.70
8	Otago Harbor Entrance	45 46	170 44	11 23	Auckland	229	−3 45	−3 25	−2.9	−0.2	0.65
9	Port Chalmers, Otago Harbor	45 49	170 39	11 23	Auckland	229	−3 20	−2 40	−3.0	−0.4	0.65
10	Dunedin, Otago Harbor	45 53	170 32	11 22	Auckland	229	−2 50	−1 20	−3.1	−0.3	0.64
11	Molyneux Bay	46 23	169 38	11 19	Auckland	229	−4 00	−3 40	−0.9	−0.2	0.91
12	Waikawa Harbor	46 39	169 09	11 17	Auckland	229	−4 28	−4 16	−1.1	−0.2	0.88
13	Ruapuke Island, Foveaux Strait	46 38	168 33	11 14	Auckland	229	+6 00	−5 40	−1.1	−0.3	0.90
14	Awarui or Bluff Harbor	46 36	168 22	11 13	Auckland	229	−4 50	−4 20	−0.9	−0.2	0.91
15	New River	46 29	168 19	11 13	Auckland	229	−5 50	−5 30	−0.9	−0.1	0.90
16	Center Island, Foveaux Strait	46 28	167 52	11 10	Auckland	229	+5 30	+5 30	−1.1	−0.2	0.88
17	Preservation Inlet	46 08	166 37	11 06	Auckland	229	+4 25	+4 50	−1.2	−0.2	0.87
18	Dusky Sound	45 46	166 33	11 06	Auckland	229	+4 28	+4 45	+0.8	−0.2	1.13
19	Bligh Sound	44 50	167 32	11 10	Auckland	229	+4 04	+4 21	−0.8	−0.2	0.92
20	Milford Sound	44 36	167 49	11 11	Auckland	229	+4 01	+4 17	−0.9	−0.1	0.90
21	Jackson Bay	43 59	168 38	11 15	Auckland	229	+4 20	+4 30	−0.7	0.0	0.91
22	Haast River Entrance	43 50	169 04	11 16	Auckland	229	+4 20	+4 30	−0.9	−0.2	0.91
23	Bruce Bay	43 35	169 36	11 18	Auckland	229	+3 45	+4 02	−1.3	−0.2	0.86
24	Okarito Lagoon	43 17	170 18	11 21	Auckland	229	+3 45	+4 05	−3.5	−0.4	0.60
25	Hokitika Bar	42 42	170 59	11 24	Auckland	229	+3 40	+4 10	+0.7	−0.1	1.10
26	Greymouth, Grey River	42 27	171 13	11 25	Auckland	229	+3 55	+4 15	+0.9	−0.2	1.14
27	Westport, Buller River	41 46	171 38	11 27	Auckland	229	+3 30	+4 00	+0.5	−0.2	1.09
28	Wanganui Inlet	40 35	172 33	11 30	Auckland	229	+2 28	+2 45	−1.7	−0.3	0.82
29	Motupipi River, West Entrance	40 48	172 49	11 31	Auckland	229	+2 20	+1 41	+4.9	+0.1	1.62
30	Astrolabe	40 58	173 06	11 32	Auckland	229	+2 20	+2 40	+4.7	+0.4	1.56
31	Nelson	41 15	173 17	11 33	Auckland	229	+2 30	+2 35	+3.0	0.0	1.39
32	Croisilles Harbor	41 03	173 42	11 35	Auckland	229	+2 43	+3 00	+2.8	0.0	1.36
33	Port Hardy	40 42	173 56	11 36	Auckland	229	+2 37	+2 54	+2.7	0.0	1.35
34	Rangitoto Road	40 48	174 01	11 36	Auckland	229	+1 10	+1 23	−1.3	−0.2	0.86
35	Pelorus Sound Entrance	40 52	174 10	11 37	Auckland	229	+2 16	+2 33	+1.9	0.0	1.25
36	Queen Charlotte Sound Entrance	41 04	174 21	11 37	Auckland	229	+1 41	+1 48	−0.9	−0.2	0 91
37	Picton Harbor	41 18	174 03	11 36	Wellington	225	+3 43	+3 57	+1.6	0.0	1 45
38	Port Underwood	41 23	174 10	11 37	Wellington	225	+1 10	+1 28	+3.8	+0.2	2 12
39	Cape Campbell	41 44	174 19	11 37	Wellington	225	+1 00	+1 10	+3.8	+0.2	2.09
40	Kaikoura Peninsula	42 28	173 44	11 35	Wellington	225	−0 23	−0 10	+2.3	+0.1	1.67
41	Port Lyttleton	43 35	172 50	11 31	Wellington	225	−0 18	0 00	+2.5	+0.1	1.73
	North Island.										
42	East Cape	37 40	178 32	11 54	Wellington	225	+2 10	+2 10	+3.0	+0.2	1.88
43	Poverty Bay	38 42	178 01	11 52	Wellington	225	+1 25	+1 38	+1.8	+0.2	1.52
44	Clyde (Wairoa River)	39 02	177 26	11 50	Wellington	225	+1 30	+1 40	+3.1	+0.1	1.91
45	Napier (Ahuriri Harbor)	39 29	176 55	11 48	Wellington	225	+1 04	+1 12	0.0	0.0	0.97
46	Cape Palliser	41 38	175 15	11 41	Wellington	225	−0 14	−0 06	+2.0	0.0	1.58
47	WELLINGTON, Port Nicholson	41 17	174 46	11 39	Wellington	225	0 00	0 00	0.0	0.0	1.00
48	Porirua Harbor	41 04	174 51	11 39	Wellington	225	+1 58	+2 11	+4.0	−0.2	2.18
49	Manawatu River	40 29	175 13	11 41	Wellington	225	+5 00	+5 50	+2.6	+0.2	1.76
50	Wanganui River	39 58	175 00	11 40	Wellington	225	+5 15	+5 25	+3.2	+0.2	1.94
51	Opunake Bay	39 29	173 52	11 35	Auckland	229	+2 18	+2 35	−0.1	0.0	0.99
52	New Plymouth (Taranaki)	39 05	174 05	11 36	Auckland	229	+2 20	+2 30	+2.5	+0.2	1.30
53	Mokau River	38 42	174 38	11 39	Auckland	229	+3 05	+3 45	+2.9	+0.2	1.35
54	Kawhia Harbor	38 04	174 50	11 39	Auckland	229	+2 10	+2 15	+2.8	+0.2	1.34
55	Whaingaroa Harbor	37 47	174 53	11 40	Auckland	229	+2 45	+2 10	+3.1	+0.2	1.38
56	Waikato River	37 24	174 47	11 39	Auckland	229	+1 57	+2 11	+3.0	+0.2	1.36
57	Manukau Harbor Entrance	37 03	174 32	11 38	Auckland	229	+2 30	+2 40	+3.4	+0.2	1.42
58	Manukau Wairopa Channel	37 04	174 31	11 38	Auckland	229	+3 00	+3 10	+4.7	+0.4	1.56
59	Onehunga Wharf	36 56	174 49	11 39	Auckland	229	+3 30	+3 50	+4.7	+0.4	1.56
60	Kaipara Harbor Entrance	36 23	174 10	11 37	Auckland	229	+3 20	+3 30	+0.9	0.0	1.12
61	Hokianga River Entrance	35 34	173 19	11 33	Auckland	229	+3 00	+3 10	+0.2	0.0	1.03
62	Cape Maria Van Diemen	34 30	172 39	11 31	Auckland	229	+1 20	+1 40	−2.0	−0.2	0.77
63	Parengarenga	34 31	173 02	11 32	Auckland	229	+0 41	+0 58	−1.9	−0.2	0.78
64	Rangaunu or Awanui River	34 52	173 19	11 33	Auckland	229	+0 35	+0 52	−1.7	−0.1	0.79
65	Whangaroa Harbor	35 06	173 46	11 35	Auckland	229	+0 50	+0 50	−2.4	−0.2	0.71

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*East.* °
1	12 24	6 17	12 27*b*	6 14*b*	6.9	8.1	5.6	7.2	0.5	0.5	.....	0.6	4.0	3.6	18.5
2	11 47	5 35	11 48*b*	5 31*b*	7.1	7.9	6.2	7.2	0.5	0.1	.....	0.5	4.0	3.6	18.5
3	1 12	7 20	1 13*a*	7 16*b*	6.9	7.7	6.1	7.0	0.5	0.1	.....	0.5	3.8	3.4	18.5
4	1 04	7 12	1 05*a*	7 08*b*	7.0	7.8	6.2	7.1	0.5	0.1	.....	0.5	3.9	3.5	18.5
5	3 23	10 06	3 24*a*	10 02*b*	6.6	7.4	5.8	6.7	0.5	0.1	.....	0.5	3.7	3.3	17.5
6	3 37	9 35	3 38*a*	9 32*b*	5.8	6.5	5.1	5.9	0.4	0.1	.....	0.4	3.2	2.9	17.5
7	3 10	9 38	3 11*a*	9 34*b*	5.4	6.0	4.8	5.5	0.4	0.1	.....	0.4	3.0	2.7	18.0
8	3 09	9 27	3 14*a*	9 23*b*	5.0	5.8	4.0	5.2	0.4	0.4	.....	0.5	2.9	2.6	18.5
9	3 34	10 12	3 35*a*	10 08*b*	5.0	5.6	4.4	5.1	0.4	0.1	4 52	0.4	2.8	2.5	18.5
10	4 03	11 31	4 04*a*	11 27*b*	4.9	5.5	4.3	5.0	0.4	0.1	.....	0.4	2.8	2.4	18.5
11	2 50	9 06	2 51*a*	9 04*b*	7.0	7.8	6.2	7.1	0.5	0.1	.....	0.5	3.9	3.5	18.5
12	2 20	8 30	2 21*a*	8 26*b*	6.8	7.6	6.0	6.9	0.5	0.1	.....	0.5	3.8	3.4	18.5
13	0 20	7 03	0 21*a*	6 59*b*	6.9	7.7	6.1	7.0	0.5	0.1	.....	0.5	3.8	3.4	18.5
14	1 54	8 22	1 55*a*	8 18*b*	7.0	7.8	6.2	7.1	0.5	0.1	.....	0.5	3.9	3.5	18.5
15	0 54	7 12	0 57*a*	7 09*b*	6.9	8.1	5.6	7.2	0.5	0.5	.....	0.6	4.0	3.6	18.5
16	12 11	5 44	12 12*b*	5 40*b*	6.8	7.6	6.0	6.9	0.5	0.1	.....	0.5	3.8	3.4	18.0
17	11 02	5 00	11 03*b*	4 56*a*	6.7	7.5	5.9	6.8	0.5	0.1	.....	0.5	3.8	3.4	18.0
18	11 05	4 55	11 06*b*	4 52*a*	8.7	9.7	7.7	8.8	0.5	0.1	.....	0.5	4.8	4.4	18.0
19	10 45	4 35	10 46*b*	4 31*a*	7.1	8.0	6.2	7.2	0.5	0.1	.....	0.5	4.0	3.6	18.0
20	10 43	4 32	10 46*b*	4 29*a*	6.9	8.1	5.6	7.2	0.5	0.5	.....	0.6	4.0	3.6	17.5
21	11 06	4 49	11 09*b*	4 46*a*	7.0	8.2	5.6	7.3	0.5	0.5	.....	0.6	4.1	3.6	17.5
22	11 07	4 50	11 08*b*	4 46*a*	7.0	7.8	6.2	7.1	0.5	0.1	.....	0.5	3.9	3.5	17.0
23	10 34	4 24	10 37*b*	4 21*a*	6.6	7.7	5.3	6.9	0.5	0.5	.....	0.6	3.8	3.4	17.0
24	10 37	4 30	10 38*b*	4 26*a*	4.6	5.1	4.0	4.7	0.4	0.1	.....	0.4	2.6	2.3	17.0
25	10 35	4 38	10 36*b*	4 35*a*	8.5	9.5	7.5	8.6	0.5	0.1	.....	0.5	4.8	4.2	17.0
26	10 52	4 45	10 53*b*	4 42*a*	8.8	9.8	7.7	8.9	0.5	0.1	.....	0.5	4.9	4.4	17.0
27	10 29	4 32	10 30*b*	4 29*a*	8.4	9.4	7.4	8.5	0.5	0.1	.....	0.5	4.7	4.2	16.5
28	9 30	3 20	9 31*b*	3 17*a*	6.3	7.0	5.5	6.4	0.4	0.1	.....	0.4	3.5	3.2	16.0
29	9 23	2 17	9 24*b*	2 15*a*	12.5	14.0	11.0	12.7	0.6	0.2	.....	0.6	7.0	6.2	16.0
30	9 24	3 17	9 25*b*	3 15*a*	12.0	14.0	9.7	12.4	0.6	0.6	.....	0.8	7.0	6.2	16.0
31	9 35	3 13	9 36*b*	3 10*a*	10.7	12.0	9.4	10.8	0.6	0.1	.....	0.6	6.0	5.4	16.5
32	9 50	3 40	9 51*b*	3 37*a*	10.5	11.8	9.2	10.6	0.6	0.1	.....	0.6	5.9	5.2	16.5
33	9 45	3 35	9 46*b*	3 32*a*	10.4	11.6	9.2	10.5	0.6	0.1	.....	0.6	5.8	5.2	16.0
34	8 18	2 04	8 21*b*	2 01*a*	6.6	7.7	5.3	6.9	0.5	0.5	.....	0.6	3.8	3.4	16.0
35	9 25	3 15	9 26*b*	3 12*a*	9.6	10.7	8.4	9.7	0.6	0.1	.....	0.6	5.4	4.8	16.0
36	8 50	2 30	8 51*b*	2 26*a*	7.0	7.8	6.2	7.1	0.5	0.1	.....	0.5	3.9	3.5	16.5
37	8 32	2 23	8 31*b*	2 29*a*	4.8	5.2	4.5	4.9	0.5	0.1	.....	0.5	2.6	2.4	16.5
38	6 00	12 15	5 59*a*	12 20*b*	7.0	7.6	6.6	7.1	0.6	0.1	.....	0.6	3.8	3.5	16.5
39	5 50	12 02	4 49*a*	12 07*b*	6.9	7.5	6.5	7.0	0.6	0.1	.....	0.6	3.8	3.4	16.5
40	4 25	10 40	4 24*a*	10 45*b*	5.5	6.0	5.2	5.6	0.5	0.1	.....	0.5	3.0	2.8	17.0
41	4 26	10 46	4 25*a*	10 51*b*	5.7	6.2	5.4	5.8	0.5	0.1	.....	0.5	3.1	2.8	17.5
42	7 18	0 55	7 17*a*	1 00*a*	6.2	6.8	5.8	6.3	0.5	0.1	.....	0.5	3.4	3.1	15.0
43	6 30	0 20	6 29*a*	0 26*a*	5.0	5.5	4.7	5.1	0.5	0.1	.....	0.5	2.8	2.5	15.5
44	6 33	0 20	6 32*a*	0 26*a*	6.3	6.9	5.9	6.4	0.6	0.1	.....	0.6	3.4	3.2	15.5
45	6 05	12 15	6 04*a*	12 22*b*	3.2	3.5	3.0	3.3	0.4	0.1	.....	0.4	1.8	1.6	15.5
46	4 40	10 50	4 39*a*	10 56*b*	5.2	5.7	4.9	5.3	0.5	0.1	.....	0.5	2.8	2.6	16.5
47	4 52	10 54	4 51*a*	11 01*b*	3.3	3.6	3.1	3.4	0.4	0.1	3 59	0.4	1.8	1.6	16.5
48	6 50	0 40	6 49*a*	0 45*a*	7.2	7.8	6.8	7.3	0.6	0.1	.....	0.6	3.9	3.6	16.5
49	9 54	4 21	9 53*a*	4 26*a*	5.8	6.3	5.4	5.9	0.5	0.1	.....	0.5	3.2	3.9	16.0
50	10 08	3 55	10 07*a*	4 00*a*	6.4	7.0	6.0	6.5	0.6	0.1	.....	0.6	3.5	3.2	16.0
51	9 25	3 15	9 29*a*	3 12*a*	7.6	8.8	6.3	7.8	0.2	0.5	.....	0.6	4.4	4.0	16.0
52	9 28	3 11	9 32*a*	3 08*a*	10.0	11.6	8.2	10.3	0.3	0.6	.....	0.7	5.8	5.2	15.5
53	10 16	4 29	10 19*a*	4 26*a*	10.4	12.2	8.4	10.7	0.6	0.6	.....	0.7	6.1	5.4	15.5
54	9 21	2 59	9 24*a*	2 56*a*	10.3	11.9	8.5	10.6	0.3	0.6	.....	0.7	6.0	5.4	15.5
55	9 57	2 55	10 00*a*	2 52*a*	10.6	12.3	8.7	10.9	0.3	0.6	.....	0.7	6.2	5.5	15.0
56	9 08	2 55	9 11*a*	2 52*a*	10.5	12.2	8.4	10.8	0.6	0.6	.....	0.7	6.1	5.4	15.0
57	9 40	3 23	9 43*a*	3 20*a*	10.9	12.6	9.0	11.2	0.3	0.6	.....	0.7	6.3	5.6	15.0
58	10 10	3 53	10 13*a*	3 50*a*	12.0	13.9	9.9	12.3	0.3	0.6	.....	0.8	7.0	6.2	15.0
59	10 41	4 34	10 43*a*	4 32*a*	12.0	14.0	9.7	12.4	0.6	0.6	.....	0.8	7.0	6.2	15.0
60	10 29	4 12	10 33*a*	4 09*a*	8.6	10.0	7.1	8.9	0.3	0.5	.....	0.6	5.0	4.5	14.5
61	10 05	3 48	10 09*a*	3 45*a*	7.9	9.2	6.5	8.1	0.2	0.5	.....	0.6	4.6	4.2	14.5
62	8 23	2 16	8 27*a*	2 15*a*	5.9	6.8	4.9	6.1	0.2	0.4	.....	0.5	3.4	3.2	14.0
63	7 45	1 35	7 48*a*	1 32*a*	6.0	7.0	4.8	6.3	0.4	0.4	.....	0.5	3.5	3.1	14.0
64	7 40	1 30	7 43*a*	1 27*a*	6.1	7.1	4.9	6.4	0.4	0.4	.....	0.5	3.6	3.2	14.0
65	7 57	1 30	8 02*a*	1 26*a*	5.5	6.4	4.5	5.7	0.2	0.4	.....	0.5	3.2	3.0	14.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	AUSTRALASIA—Continued.										
	NEW ZEALAND—continued.						*Time meridian, 172° 30′ East.*		*Mean Low Water Springs.*		
	North Island—Continued.	*South.*	*East.*								
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Port Russell (Bay of Islands)	35 16	174 08	11 37	Auckland	229	+0 17	+1 13	−2.8	−0.2	0.66
2	Whangaruru	35 26	174 24	11 38	Auckland	229	+0 05	+0 22	−2.3	−0.2	0.73
3	Tutukaka	35 39	174 34	11 38	Auckland	229	−0 02	+0 14	−2.1	−0.1	0.74
4	Wangarie Harbor	35 53	174 30	11 38	Auckland	229	−0 05	+0 12	−2.1	−0.2	0.75
5	Great Barrier Island, Nagle Cove	36 11	175 33	11 42	Auckland	229	−0 19	−0 02	−0.1	−0.1	1.00
6	AUCKLAND HARBOR	36 50	174 49	11 39	Auckland	229	0 00	0 00	0.0	0.0	1.00
7	River Thames, Entrance	37 10	175 35	11 42	Auckland	229	+0 10	+0 30	+1.9	+0.1	1.23
8	Coromandel Harbor	36 45	175 31	11 42	Auckland	229	−0 09	+0 08	+1.7	+0.2	1.19
9	Mercury Bay	36 46	175 54	11 44	Auckland	229	−0 02	+0 12	−1.7	−0.2	0.81
10	Tauranga Harbor	37 36	176 12	11 45	Auckland	229	−0 12	+0 05	−2.7	−0.3	0.69
11	Opotiki River	38 00	177 18	11 49	Auckland	229	−0 21	−0 04	−3.7	−0.3	0.56
12	Cape Runaway	37 32	178 00	11 52	Auckland	229	+0 46	+1 08	−2.2	−0.2	0.74
	LESSER ISLANDS.										
	Detached islands.						*Local time.*				
13	Port Hutt, Chatham Islands	43 47	183 22	12 13	Auckland	229	− 1 41	− 0 13	−6.0	−0.6	0.30
14	Antipodes Islands	49 41	178 42	11 55	Auckland	229	− 3 43	− 3 31	−3.4	−0.4	0.62
15	Perseverance Harbor, Campbell I.	52 34	169 09	11 17	Auckland	229	+ 6 54	+ 7 15	−5.0	−0.4	0.39
16	Port Ross, Auckland Island	50 32	166 17	11 05	Auckland	229	+ 4 49	+ 5 04	−5.3	−0.5	0.38
17	Norfolk Island	29 03	167 59	11 12	Auckland	229	+ 0 29	+ 0 43	−3.8	−0.4	0.56
18	Lord Howe Island	31 34	159 06	10 36	Sydney	233	− 0 27	− 0 26	+1.1	+0.1	1.30
19	Middleton Reef	29 27	159 09	10 37	Sydney	233	− 0 32	− 0 32	+1.0	0.0	1.27
	New Caledonia.										
20	Port Alcmène, Isle of Pines	22 29	167 30	11 10	Apia	221	−11 42	−11 39	+0.4	0.0	1.12
21	Noumea Bay	22 12	166 30	11 06	Apia	221	−11 12	−11 11	0.0	0.0	0.99
22	Port St. Vincent	21 53	166 05	11 04	Apia	221	+10 58	+10 53	0.0	0.0	1.04
23	Port Balad	20 15	164 25	10 58	Apia	221	+11 28	+11 26	+0.3	+0.1	1.08
24	Port Yengen	20 39	164 56	11 00	Apia	221	+11 18	+11 19	+0.4	0.0	1.12
	Loyalty Islands.										
25	Wreck Bay, Lifou Island	20 45	167 05	11 06	Apia	221	+11 43	+11 44	+0.9	+0.1	1.31
	New Hebrides Islands.										
26	Port Sandwich, Mallicolo Island	16 26	167 47	11 11	Melbourne	237	+ 2 52	+ 2 40	+1.4	+0.4	1.65
27	Havannah Harbor, Efate Island	17 35	168 16	11 13	Melbourne	237	+ 2 42	+ 2 30	+0.8	+0.2	1.41
28	Aneityum Island	20 15	169 44	11 19	Melbourne	237	+ 2 37	+ 2 26	+1.0	+0.2	1.47
	Banks Islands.										
29	Patteson, Vanua Lava Island	13 48	167 31	11 10	Apia	221	+11 53	+11 56	+0.6	0.0	1.19
	Santa Cruz Islands.										
30	Vanikoro Island	11 36	166 55	11 08	Apia	221	+10 03	+10 06	+0.6	0.0	1.19
	Solomon Islands.										
31	Makira Bay, San Christoval I	10 30	161 30	10 46	Apia	221	+11 59	+12 00	0.0	0.0	1.04
32	Vulavu, Isabel Island	8 30	159 40	10 39	Apia	221	+10 14	+10 17	+0.3	+0.1	1.08
33	Gazelle Harbor, Bougainville I	6 35	155 05	10 20	Apia	221	− 7 36	− 7 36	−0.4	0.0	0.85
	New Britain Island.										
34	Blanche Bay	4 13	152 12	10 09	Apia	221	−10 35	−10 37	−1.0	−0.2	0.65
	New Ireland Island.										
35	Holz Haven	2 48	150 57	10 04	Apia	221	− 4 20	− 4 19	−0.8	0.0	0.73
	New Hanover Island.										
36	North Haven	2 26	149 55	10 00	Apia	221	− 4 40	− 4 39	−0.8	0.0	0.73
	Louisiade Archipelago.										
37	Joannet Harbor, Joannet Island	11 12	153 18	10 13	Apia	221	+ 2 40	+ 2 41	+2.5	+0.3	1.85
38	Richards Bay, Woodlark Island	9 03	152 49	10 11	Apia	221	− 0 05	− 0 04	+0.9	+0.1	1.31
	NEW GUINEA, OR PAPUA.										
	Dutch New Guinea.										
39	Dourga Strait	7 27	138 44	9 15	Bombay	261	+11 55	+12 03	+2.2	−0.2	1.29
40	Triton Bay	3 47	134 06	8 56	Nagasaki	185	+ 5 10	+ 5 05	−0.7	−0.4	0.95
41	Segaar Bay	2 40	132 23	8 50	Nagasaki	185	− 1 50	− 1 55	−1.8	−0.5	0.79
42	Cape Spencer, Dampier Strait	0 53	131 15	8 45	Bombay	261	− 6 29	− 6 19	−0.6	−0.6	0.99
	German New Guinea.										
43	Port Constantine	5 30	145 48	9 43	Nagasaki	185	+ 9 28	+ 9 24	−4.4	−0.7	0.40
44	Rook Island	5 33	148 00	9 52	Nagasaki	185	+ 8 58	+ 8 53	−4.6	−0.8	0.39
45	Parsee Point	6 38	147 10	9 49	Nagasaki	185	+ 9 13	+ 9 09	−4.4	−0.8	0.42
	English New Guinea.										
46	Kiriwina, Trobriand Islands	8 28	151 03	10 04	Nagasaki	185	+ 8 57	+ 8 53	−4.6	−0.8	0.39
47	Cape Vogel, Ward Hunt Strait	9 40	150 01	10 00	Nagasaki	185	+ 9 02	+ 8 55	−5.1	−0.8	0.31
48	East Cape, Goschen Strait	10 13	150 54	10 04	Nagasaki	185	− 0 28	− 0 32	−2.8	−0.6	0.65
49	China Strait	10 33	150 41	10 03	Nagasaki	185	+ 0 12	+ 0 07	−2.0	−0.5	0.76
50	Su-a-u Harbor	10 43	150 14	10 01	Nagasaki	185	+ 1 02	+ 0 55	0.0	−0.4	1.07
51	Port Moresby	9 25	147 07	9 48	Nagasaki	185	+ 0 38	+ 0 34	0.0	−0.3	1.05
52	Fly River Entrance	8 43	143 26	9 34	Bombay	261	− 2 00	− 1 55	+1.8	−0.2	1.25

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	7 26	1 55	7 31*a*	1 51*a*	5.1	5.9	4.2	5.8	0.2	0.4	11 48	0.5	3.0	2.7	14.5
2	7 15	1 05	7 20*a*	1 01*a*	5.6	6.5	4.6	5.8	0.2	0.4	.....	0.5	3.2	3.0	14.5
3	7 08	0 57	7 11*a*	0 54*a*	5.7	6.7	4.6	6.0	0.4	0.4	.....	0.5	3.4	3.0	14.5
4	7 05	0 55	7 09*a*	0 51*a*	5.8	6.7	4.8	6.0	0.2	0.4	.....	0.5	3.4	3.1	14.5
5	6 55	0 45	6 59*a*	0 42*a*	7.7	8.9	6.8	7.9	0.2	0.5	.....	0.6	4.4	4.0	14.5
6	7 11	0 44	7 14*a*	0 41*a*	7.7	9.0	6.2	8.0	0.5	0.5	9 50	0.6	4.5	4.0	15.0
7	7 24	1 17	7 28*a*	1 14*a*	9.5	11.0	7.8	9.8	0.3	0.5	.....	0.7	5.5	5.0	15.0
8	7 05	0 55	7 09*a*	0 52*a*	9.2	10.7	7.6	9.5	0.3	0.5	.....	0.7	5.4	4.8	15.0
9	7 14	1 01	7 19*a*	0 57*a*	6.2	7.2	5.1	6.4	0.2	0.4	.....	0.6	3.6	3.3	15.0
10	7 05	0 55	7 10*a*	0 51*a*	5.3	6.1	4.4	5.5	0.2	0.4	.....	0.5	3.0	2.8	15.0
11	7 00	0 50	7 06*a*	0 45*a*	4.3	5.0	3.5	4.5	0.2	0.4	.....	0.5	2.5	2.4	15.0
12	8 10	2 00	8 14*a*	1 56*a*	5.7	6.6	4.7	5.9	0.2	0.4	.....	0.5	3.3	3.0	15.0
13	5 22	0 23	5 24*a*	0 20*a*	2.3	2.5	2.1	2.4	0.3	0.2	.....	0.4	1.2	1.2	17.0
14	3 20	9 30	3 22*a*	9 27*a*	4.8	5.3	4.3	5.2	0.4	0.2	.....	0.4	2.6	2.5	21.0
15	1 30	7 49	1 00*a*	7 24*a*	3.0	3.5	2.3	3.4	0.5	0.4	.....	0.6	1.8	1.7	21.5
16	11 50	5 38	11 52*a*	5 34*a*	2.9	3.2	2.6	3.2	0.3	0.2	.....	0.3	1.6	1.6	19.5
17	7 30	1 17	7 32*a*	1 13*a*	4.3	4.7	3.9	4.6	0.3	0.2	.....	0.4	2.4	2.3	12.0
18	8 20	2 08	8 13*a*	2 32*a*	4.4	5.4	3.3	5.4	1.7	0.5	.....	1.8	2.7	2.5	11.0
19	8 15	2 02	8 09*a*	2 25*a*	4.3	5.3	3.2	5.3	1.7	0.5	.....	1.7	2.6	2.4	11.0
20	7 55	1 45	7 54*a*	1 54*a*	2.9	3.6	2.2	3.0	0.4	0.1	.....	0.4	1.8	1.4	10.5
21	8 25	2 13	8 24*a*	2 23*a*	2.5	3.1	1.9	2.6	0.4	0.1	.....	0.4	1.6	1.2	10.5
22	5 40	11 52	5 39*a*	12 02*b*	2.7	3.3	2.0	2.8	0.4	0.1	.....	0.4	1.6	1.3	10.5
23	6 15	0 00	6 14*a*	0 09*a*	2.8	3.5	2.1	2.9	0.4	0.1	.....	0.4	1.8	1.2	10.0
24	6 05	12 18	6 04*a*	12 27*b*	2.9	3.6	2.2	3.0	0.4	0.1	.....	0.4	1.8	1.4	10.0
25	6 30	0 18	6 29*a*	0 26*a*	3.4	4.2	2.5	3.5	0.4	0.1	.....	0.4	2.1	1.7	10.5
26	4 38	10 50	3 32*b*	11 01*b*	2.8	3.8	1.9	3.1	0.5	1.6	.....	1.7	1.9	1.8	9.5
27	5 15	11 27	4 10*b*	11 38*b*	2.4	3.0	1.8	2.7	0.4	1.1	.....	1.3	1.5	1.4	10.0
28	5 10	11 23	4 05*b*	11 34*b*	2.5	3.1	1.9	2.9	0.4	1.2	.....	1.4	1.6	1.5	10.5
29	6 40	0 30	6 39*a*	0 38*a*	3.1	3.8	2.3	3.2	0.4	0.1	.....	0.4	1.9	1.5	9.5
30	4 50	11 05	4 49*a*	11 13*b*	3.1	3.8	2.3	3.2	0.4	0.1	.....	0.4	1.9	1.5	9.0
31	6 45	0 33	6 44*a*	0 43*a*	2.7	3.3	2.0	2.8	0.4	0.1	.....	0.4	1.6	1.3	8.5
32	5 00	11 15	4 59*a*	11 24*b*	2.8	3.5	2.1	2.9	0.4	0.1	.....	0.4	1.8	1.4	8.0
33	12 00	5 47	11 59*a*	6 01*a*	2.2	2.7	1.6	2.2	0.3	0.1	.....	0.3	1.4	1.1	7.0
34	9 00	2 45	8 58*a*	2 57*a*	1.7	2.1	1.3	1.7	0.3	0.1	.....	0.3	1.0	0.8	6.5
35	2 50	9 08	2 49*b*	9 13*a*	1.9	2.4	1.4	1.9	0.3	0.1	.....	0.3	1.2	0.9	6.0
36	2 30	8 43	2 29*b*	8 58*a*	1.9	2.4	1.4	1.9	0.3	0.1	.....	0.3	1.2	0.9	5.5
37	9 50	3 38	9 49*b*	3 44*b*	4.8	5.9	3.6	4.9	0.5	0.1	.....	0.5	3.0	2.4	7.0
38	7 05	0 53	7 04*b*	1 01*b*	3.4	4.2	2.5	3.4	0.4	0.1	.....	0.4	2.1	1.7	7.0
39	11 45	5 33	12 10*a*	5 32*a*	11.3	14.0	8.3	20.2	2.5	6.1	.....	6.6	7.0	8.6	4.0
40	0 55	7 08	1 30*b*	7 06*a*	5.9	7.3	4.3	12.3	1.8	4.4	.....	4.8	3.6	5.2	3.0
41	6 20	0 07	6 59*b*	0 05*b*	4.9	6.0	3.6	10.7	1.6	4.0	.....	4.4	3.0	4.4	3.0
42	5 45	12 00	6 14*b*	11 59*a*	8.7	10.7	6.4	16.5	2.2	5.4	.....	5.8	5.4	7.1	2.5
43	5 15	11 28	6 08*b*	11 26*a*	2.5	3.1	1.8	6.7	1.2	2.9	.....	3.1	1.6	2.8	5.0
44	4 45	10 57	5 40*b*	10 54*a*	2.4	3.0	1.8	6.4	1.1	2.8	.....	3.1	1.5	2.6	5.5
45	5 00	11 13	5 53*b*	11 11*a*	2.6	3.2	1.9	6.7	1.2	2.9	.....	3.2	1.6	2.8	5.5
46	4 45	10 58	5 40*b*	10 55*a*	2.4	3.0	1.8	6.4	1.1	2.8	.....	3.1	1.5	2.6	6.5
47	4 50	11 00	5 51*b*	10 57*a*	1.9	2.4	1.4	5.5	1.0	2.5	.....	2.7	1.2	2.2	6.5
48	7 45	1 33	8 27*b*	1 31*b*	4.0	5.0	2.9	9.4	1.5	3.7	.....	3.9	2.5	3.8	6.5
49	8 25	2 12	9 04*b*	2 10*b*	4.7	5.8	3.4	10.5	1.6	4.0	.....	4.3	2.9	4.4	6.5
50	9 15	3 00	9 48*b*	2 58*b*	6.6	8.1	4.8	13.5	1.9	4.8	.....	5.1	4.0	5.7	6.5
51	8 50	2 38	9 22*b*	2 36*b*	6.5	8.0	4.8	13.1	1.8	4.6	.....	4.9	4.0	5.5	5.5
52	10 15	4 00	10 41*b*	3 59*b*	10.9	13.5	8.0	19.6	2.4	6.0	.....	6.5	6.8	8.4	5.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	AUSTRALASIA—Continued.										
	AUSTRALIA.										
	North Australia.	*South.*	*East.*				*Time meridian, 135° East.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Turtle Point, Victoria River	14 50	129 14	8 37	Bombay	261	− 4 51	− 4 43	+ 6.4	+0.2	1.72
2	Pearce Point	14 23	129 20	8 37	Bombay	261	− 5 06	− 5 04	+10.4	+0.6	2.12
3	Port Keats	14 05	129 37	8 38	Bombay	261	− 6 07	− 5 59	+ 9.4	+0.6	2.02
4	Port Patterson	12 39	130 25	8 42	Bombay	261	− 8 06	− 8 01	+ 4.8	0.0	1.54
5	Port Darwin	12 23	130 37	8 42	Bombay	261	− 6 59	− 6 43	+ 5.0	0.0	1.58
6	Adelaide River Entrance	12 10	131 13	8 45	Bombay	261	− 6 44	− 6 37	+ 4.8	0.0	1.55
7	Port Essington	11 11	132 07	8 48	Bombay	261	− 9 02	− 7 55	+ 1.2	−0.4	1.18
8	Liverpool River Entrance	12 00	134 15	8 57	Bombay	261	− 5 54	− 5 46	+ 0.4	−0.4	1.11
9	Cape Wilberforce	11 54	136 34	9 06	Bombay	261	− 4 21	− 4 13	− 1.6	−0.6	0.90
10	Sir Edward Pellew Islands	15 34	137 01	9 08	Nagasaki	185	− 1 04	− 1 08	− 1.3	−0.5	0.87
	Queensland.						*Time meridian, 150° East.*				
11	Kimberly	17 27	140 56	9 24	Nagasaki	185	+10 19	+10 14	+ 0.6	−0.2	1.13
12	Booby Island, Torres Strait	10 36	141 55	9 28	Cape Horn	141	−11 07	−11 10	+ 2.6	+0.4	1.50
13	Cape York, Torres Strait	10 43	142 31	9 30	Cape Horn	141	+10 21	+10 18	+ 2.7	+0.5	1.52
14	Murray Islands, Torres Strait	9 57	144 02	9 36	Cape Horn	141	+ 6 04	− 6 24	+ 4.3	+0.5	1.90
15	Cape Sidmouth	13 24	143 36	9 34	Cape Horn	141	+ 5 51	− 6 35	+ 4.2	+0.6	1.86
16	Cooktown	15 27	145 15	9 41	Cape Horn	141	+ 6 28	− 5 56	+ 0.4	+0.4	0.98
17	Cairns Harbor	16 55	145 47	9 43	Cape Horn	141	+ 6 26	− 6 00	+ 1.0	+0.6	1.07
18	Townsville	19 15	146 50	9 47	Cape Horn	141	+ 6 28	− 5 57	+ 3.4	+0.6	1.69
19	Bowen, Port Denison	20 01	148 15	9 53	Cape Horn	141	+ 6 37	− 5 48	+ 3.6	+0.6	1.74
20	Mackay, Pioneer River	21 09	149 16	9 57	Cape Horn	141	+ 7 28	− 4 57	+10.7	+1.3	3.24
21	Rockhampton, Fitzroy River	23 22	150 32	10 02	Cape Horn	141	+ 8 07	− 4 18	+ 4.2	+0.6	1.88
22	Bundaberg, Burnett River	24 45	152 18	10 09	Cape Horn	141	+ 5 30	− 6 58	+ 8.5	+0.5	1.71
23	Brisbane Bar	27 31	153 00	10 12	Cape Horn	141	+ 6 12	− 6 13	+ 0.8	+0.2	1.12
	New South Wales.										
24	Ballina	28 52	153 33	10 14	Sydney	233	+ 0 07	+ 0 25	− 1.2	−0.2	0.68
25	Southhead, Clarence River	29 25	153 23	10 14	Sydney	233	− 0 40	− 0 42	− 0.2	0.0	0.95
26	Port Macquarie	31 25	152 56	10 12	Sydney	233	+ 0 07	+ 0 06	− 0.2	0.0	0.98
27	Crowdy Head	31 51	152 46	10 11	Sydney	233	+ 0 13	+ 0 14	+ 0.6	0.0	1.18
28	Port Stephens	32 45	152 13	10 09	Sydney	233	− 0 35	− 0 37	+ 1.5	+0.1	1.42
29	Newcastle	32 57	151 44	10 07	Sydney	233	− 0 06	− 0 13	0.0	0.0	1.00
30	SYDNEY	33 52	151 12	10 05	Sydney	233	0 00	0 00	0.0	0.0	1.00
31	Botany Bay	33 59	151 09	10 05	Sydney	233	− 0 46	− 0 36	+ 2.6	+0.2	1.69
32	Ulladulla Harbor	35 22	150 31	10 02	Sydney	233	− 0 23	− 0 23	+ 1.1	+0.1	1.30
33	Montagu Island	36 15	150 14	10 01	Sydney	233	− 0 22	− 0 22	+ 1.0	0.0	1.27
34	Eden, Twofold Bay	37 05	149 55	10 00	Sydney	233	− 0 36	− 0 36	+ 0.9	+0.1	1.24
	Victoria.										
35	Gabo Island	37 35	149 55	10 00	Sydney	233	− 0 01	− 0 01	+ 0.4	−0.2	1.18
36	Entrance to Gippsland lakes	37 48	148 32	9 54	Sydney	233	− 0 15	− 0 15	− 1.1	−0.3	0.77
37	Corner Inlet	38 43	146 35	9 46	Melbourne	237	− 2 12	− 2 24	+ 5.0	+0.2	3.76
38	Venus Bay	38 41	145 46	9 43	Melbourne	237	− 2 52	− 3 04	+ 4.2	+0.2	3.29
39	Port Western	38 31	145 22	9 41	Melbourne	237	− 2 09	− 2 20	+ 6.2	+0.2	4.47
40	Sorrents Back Beach (Ocean Beach)	38 22	144 46	9 39	Melbourne	237	− 3 39	− 4 44	+ 5.0	+0.2	3.82
41	Nepean Point, Port Phillip	38 18	144 39	9 39	Melbourne	237	− 3 51	− 4 03	+ 0.4	0.0	1.29
42	Geelong, Port Phillip	38 07	144 26	9 38	Melbourne	237	− 0 06	− 0 12	+ 1.0	0.0	1.59
43	MELBOURNE (Williamstown)	37 52	144 54	9 40	Melbourne	237	0 00	0 00	0.0	0.0	1.00
44	Warrnambool Harbor, Lady Bay	38 23	142 26	9 30	Melbourne	237	− 1 33	− 1 44	+ 0.8	0.0	1.47
45	Portland Bay	38 20	141 37	9 26	Melbourne	237	− 1 36	− 1 45	+ 0.8	0.0	1.41
	Tasmania and Bass Strait.										
46	Currie Harbor, King Island	39 57	143 51	9 35	Melbourne	237	− 1 30	− 1 39	+ 0.8	0.0	1.47
47	Port Dalrymple	41 03	146 49	9 47	Melbourne	237	− 3 32	− 3 41	+ 6.6	+0.4	4.71
48	Goose Island, Banks Strait	40 19	147 48	9 51	Melbourne	237	− 4 08	− 4 20	+ 5.8	+0.2	4.24
49	Hobart	42 53	147 21	9 49	Melbourne	237	− 6 39	− 6 51	+ 2.1	+0.2	2.18
50	Macquarie Harbor	42 12	145 13	9 41	Melbourne	237	− 7 16	− 7 28	+ 0.8	0.0	1.41
	South Australia.						*Time meridian, 135° East.*				
51	Port Macdonnel	38 04	140 40	9 23	Port Adelaide	241	− 5 13	− 5 17	− 2.1	−0.4	0.62
52	Kingston	36 50	139 51	9 19	Port Adelaide	241	− 5 09	− 5 15	− 2.0	−0.4	0.64
53	Cape Willoughby, Kangaroo I	35 51	138 10	9 13	Port Adelaide	241	− 1 05	− 1 07	− 1.3	−0.2	0.75
54	PORT ADELAIDE	34 51	138 30	9 14	Port Adelaide	241	0 00	0 00	0.0	0.0	1.00
55	Port Wakefield	34 12	138 09	9 13	Port Adelaide	241	+ 0 48	− 1 00	+ 2.1	+0.3	1.40
56	Port Victoria, Spencer Gulf	34 30	137 28	9 10	Port Adelaide	241	− 2 35	− 2 40	− 2.2	−0.4	0.60
57	Port Wallaroo, Spencer Gulf	33 55	137 37	9 10	Port Adelaide	241	+ 0 30	+ 0 32	− 2.3	−0.4	0.57
58	Port Pirie, Spencer Gulf	33 06	138 00	9 12	Port Adelaide	241	+ 2 42	+ 2 46	+ 0.7	+0.2	1.12
59	Port Augusta, Spencer Gulf	32 28	137 46	9 11	Port Adelaide	241	+ 3 15	+ 2 27	+ 2.7	+0.4	1.50
60	Coffin Bay	34 26	135 22	9 01	Port Adelaide	241	− 4 30	− 4 27	− 1.7	−0.4	0.72
61	Port Eyre	31 57	132 30	8 50	Port Adelaide	241	− 5 15	− 5 20	− 1.7	−0.4	0.72

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	7 00	0 48	7 22*b*	0 47*b*	15.1	18.6	11.0	25.3	2.8	7.1	.....	7.6	9.3	11.2	2.5
2	6 45	0 27	7 05*b*	0 26*b*	18.6	23.0	13.6	29.9	3.1	7.9	.....	8.5	11.5	13.2	2.5
3	5 45	11 58	6 05*b*	11 57*a*	17.7	21.9	12.9	28.8	3.1	7.7	.....	8.3	11.0	12.6	2.5
4	3 50	10 00	4 13*b*	9 59*a*	13.5	16.7	9.9	23.2	2.7	6.7	.....	7.2	8.4	10.2	2.5
5	4 57	11 18	5 20*b*	11 17*a*	13.8	17.0	10.0	23.6	2.7	6.8	.....	7.3	8.5	10.3	3.0
6	5 15	11 27	5 38*b*	11 26*a*	13.6	16.8	9.9	23.4	2.7	6.8	.....	7.3	8.4	10.2	3.0
7	4 00	10 12	4 26*b*	10 11*a*	10.3	12.7	7.5	18.8	2.3	5.9	.....	6.3	6.4	8.2	3.0
8	6 17	0 05	6 44*b*	0 04*b*	9.7	12.0	7.1	18.2	2.3	6.0	.....	6.1	6.0	7.6	3.5
9	8 00	1 48	8 30*b*	1 47*b*	7.9	9.8	5.8	15.3	2.1	5.1	.....	5.5	4.9	6.6	4.0
10	7 15	1 03	7 52*b*	1 01*b*	5.4	6.6	4.0	11.5	1.7	4.2	.....	4.6	3.3	4.8	4.0
11	5 30	11 42	6 02*b*	11 41*b*	7.0	8.7	5.1	14.0	2.0	4.8	.....	5.2	4.4	5.9	5.0
12	4 20	10 30	4 15*b*	10 49*b*	6.3	7.8	4.7	7.5	2.1	0.6	.....	2.1	3.9	3.4	4.5
13	1 00	7 10	0 55*b*	7 30*b*	6.4	8.0	4.7	7.6	2.1	0.6	.....	2.2	4.0	3.5	5.0
14	9 15	3 00	9 10*a*	3 17*a*	8.0	9.7	5.9	9.3	2.3	0.7	.....	2.4	4.8	4.4	5.0
15	9 00	2 47	8 55*a*	2 59*a*	7.8	9.6	5.8	9.1	2.3	0.7	.....	2.4	4.8	4.3	5.0
16	9 44	3 31	9 44*a*	3 13*a*	4.1	5.5	2.8	4.7	1.2	0.1	9 43	1.2	2.8	2.1	5.5
17	9 44	3 31	10 04*a*	3 03*a*	4.5	6.4	1.9	6.0	2.1	1.6	12 10	2.6	3.2	2.9	6.0
18	9 50	3 38	9 45*a*	3 57*a*	7.1	8.7	5.3	8.4	2.2	0.7	.....	2.3	4.4	3.9	6.5
19	10 05	3 53	10 00*a*	4 12*a*	7.3	9.0	5.4	8.6	2.2	0.7	.....	2.3	4.5	4.0	7.0
20	11 00	4 48	10 56*a*	5 01*a*	13.6	16.8	10.0	15.3	3.0	0.9	.....	3.1	8.4	7.3	7.5
21	11 45	5 33	11 40*a*	5 50*a*	7.9	9.7	5.9	9.2	2.3	0.7	.....	2.4	4.8	4.0	8.0
22	9 15	3 00	9 10*a*	3 19*a*	7.2	8.9	5.3	8.5	2.2	0.7	.....	2.3	4.4	4.0	8.5
23	10 00	3 48	10 05*a*	3 22*a*	4.7	5.8	3.3	5.5	1.9	0.4	10 46	1.9	2.9	2.4	9.5
24	9 02	3 07	9 08*a*	2 24*a*	2.3	2.8	1.8	3.1	1.6	0.2	9 41	1.6	1.4	1.2	9.5
25	8 15	2 00	8 07*a*	2 27*b*	3.2	4.0	2.4	4.0	1.5	0.4	.....	1.5	2.0	1.8	9.5
26	9 00	2 46	8 53*a*	3 12*b*	3.3	4.1	2.4	4.2	1.5	0.5	.....	1.5	2.0	1.9	10.0
27	9 05	2 58	8 59*a*	3 16*b*	4.0	4.9	3.0	4.9	1.6	0.5	.....	1.6	2.4	2.3	10.0
28	8 15	2 00	8 09*a*	2 23*b*	4.8	5.8	3.6	5.9	1.8	0.6	.....	1.9	2.9	2.7	10.0
29	8 42	2 22	8 32*a*	2 51*b*	3.4	4.2	2.5	4.2	1.6	0.6	7 07	1.6	2.1	1.9	10.0
30	8 46	2 33	8 37*a*	3 00*b*	3.4	4.2	2.6	4.3	1.5	0.5	7 21	1.5	2.1	1.9	10.0
31	8 00	1 57	7 54*a*	2 17*b*	5.7	7.0	4.2	6.8	2.0	0.6	.....	2.0	3.5	3.2	10.0
32	8 20	2 07	8 13*a*	2 31*b*	4.4	5.4	3.3	5.4	1.7	0.5	.....	1.8	2.7	2.5	10.0
33	8 20	2 07	8 13*a*	2 31*b*	4.3	5.3	3.2	5.3	1.7	0.5	.....	1.8	2.6	2.4	10.0
34	8 05	1 52	7 59*a*	2 15*b*	4.2	5.2	3.1	5.2	1.7	0.5	.....	1.7	2.6	2.4	10.0
35	8 40	2 27	8 34*a*	2 50*b*	4.0	4.5	3.4	5.0	1.7	0.5	.....	1.6	2.2	2.1	10.0
36	8 20	2 07	8 12*a*	2 36*b*	2.6	2.9	2.2	3.5	1.4	0.3	.....	1.3	1.4	1.4	9.5
37	0 04	6 16	0 22*a*	6 13*b*	6.4	7.2	5.5	7.8	0.4	2.0	.....	2.0	3.6	3.3	9.0
38	11 46	5 33	12 05*b*	5 30*b*	5.6	6.3	4.8	6.9	0.4	1.8	.....	1.9	3.2	3.7	8.5
39	0 02	6 15	0 19*a*	6 12*b*	7.6	8.5	6.5	9.1	0.4	2.2	.....	2.2	4.2	4.9	8.0
40	10 55	3 49	11 13*b*	3 46*b*	6.5	7.3	5.7	7.7	0.4	2.0	.....	2.0	3.6	4.2	8.0
41	10 43	4 30	11 11*b*	4 26*b*	2.2	2.5	1.9	3.0	0.2	1.2	.....	1.1	1.2	1.7	8.0
42	2 02	8 20	2 29*a*	8 16*b*	2.7	3.0	2.3	3.6	0.2	1.3	.....	1.3	1.5	2.0	7.5
43	2 10	8 34	3 02*a*	8 17*b*	1.7	2.0	1.6	2.5	0.3	1.0	7 45	1.2	1.0	1.4	7.5
44	0 27	6 40	0 57*a*	6 35*b*	2.5	2.8	2.2	3.3	0.2	1.2	.....	1.3	1.4	1.8	6.5
45	0 20	6 35	0 48*a*	6 31*b*	2.4	2.7	2.1	3.2	0.2	1.2	.....	1.2	1.4	1.8	6.0
46	0 35	6 50	1 05*a*	6 45*b*	2.5	2.8	2.2	3.3	0.2	1.2	.....	1.3	1.4	1.8	7.5
47	11 10	5 00	11 25*b*	4 58*b*	8.0	9.0	6.9	9.5	0.4	2.2	.....	2.2	4.5	5.1	9.0
48	10 38	4 25	10 55*b*	4 22*b*	7.2	8.1	6.2	8.7	0.4	2.1	.....	2.1	4.0	4.6	9.5
49	8 05	1 52	8 28*b*	1 48*b*	3.7	4.2	3.2	4.7	0.3	1.5	.....	1.5	2.1	2.6	10.0
50	7 20	1 07	7 48*b*	1 03*b*	2.4	2.7	2.1	3.2	0.2	1.2	.....	1.2	1.4	1.8	8.5
51	11 25	5 14	11 11*b*	6 06*a*	2.8	3.9	0.6	3.7	2.1	0.6	.....	2.2	2.0	1.5	5.5
52	11 25	5 12	11 11*b*	6 03*a*	2.9	4.0	0.6	3.8	2.2	0.6	.....	2.2	2.0	1.6	5.5
53	2 58	9 14	2 45*a*	10 01*a*	3.4	4.7	0.7	4.4	2.3	0.7	.....	2.4	2.4	1.8	5.0
54	4 04	10 22	3 53*a*	11 03*a*	4.5	6.3	0.9	5.6	2.7	0.8	2 53	2.8	3.2	2.4	5.0
55	4 51	9 21	4 42*a*	9 56*a*	6.3	8.8	1.3	7.6	3.2	0.9	.....	3.3	4.4	3.3	5.0
56	1 25	7 38	1 11*a*	8 31*a*	2.7	3.8	0.5	3.5	2.1	0.6	.....	2.2	1.9	1.5	5.0
57	4 30	10 50	4 15*a*	11 45*a*	2.6	3.6	0.5	3.4	2.0	0.6	.....	2.1	1.8	1.4	5.0
58	6 44	0 41	6 34*a*	1 20*b*	5.0	7.1	1.0	6.2	2.9	0.8	.....	3.0	3.6	2.7	5.0
59	7 16	0 21	7 07*a*	0 55*b*	6.8	9.4	1.4	8.1	3.3	1.0	.....	3.4	4.7	3.6	5.0
60	11 46	5 42	11 33*b*	6 30*b*	3.2	4.5	0.6	4.1	2.3	0.7	.....	2.4	2.2	1.7	4.0
61	10 49	4 37	10 36*b*	5 25*a*	3.2	4.5	0.6	4.1	2.3	0.7	.....	2.4	2.2	1.7	3.0

Number.	Station.	Geographic position. Latitude.	Longitude. Arc.	Longitude. Time.	Standard port for reference. Name.	Page.	Tidal differences. Time. HW.	Time. LW.	Height. HW.	Height. LW.	Ratio of ranges.
	AUSTRALASIA—Continued.										
	AUSTRALIA—continued.										
	Western Australia.	*South.*	*East.*				*Time meridian, 120° East.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Princess Royal Har., K. Geo. Sd	35 08	118 00	7 52	Batavia	209	+12 44	+12 41	− 0.1	+0.5	0.79
2	Albany, King George Sound	35 01	117 54	7 52	Batavia	209	+12 22	+11 04	+ 0.3	+0.5	0.93
3	Freemantle, Swan River Entrance	32 03	115 45	7 43	Batavia	209	+11 08	+11 37	− 0.2	+0.4	0.75
4	Champion Bay	28 47	114 35	7 38	Batavia	209	+10 21	+ 9 33	+ 0.7	+0.5	1.07
5	Port Walcott	20 39	117 13	7 49	Bombay	261	− 0 31	+11 54	+ 5.6	0.0	1.63
6	Collier Bay	16 23	124 25	8 18	Bombay	261	− 0 44	+11 34	+20.7	+1.7	3.17
7	Cambridge Bay	15 00	128 10	8 33	Bombay	261	− 4 41	+ 7 49	+10.2	+0.6	2.10
	ASIA (SOUTH COAST).										
	INDIA.										
	Bay of Bengal.	*North.*					*Time meridian, 97° 30′ East.*				
8	Nankauri Harbor, Nicobar Islands	8 03	93 30	6 14	St. Johns	53	−11 07	−11 09	+ 4.1	+0.9	2.23
9	Port Blair, Andaman Islands	11 41	92 45	6 11	St. Johns	53	−10 29	−10 31	+ 2.4	+0.6	1.69
10	Port Cornwallis, Andaman Islands	13 19	93 00	6 12	St. Johns	53	−10 21	−10 23	+ 4.3	+0.9	2.31
11	Mergui	12 26	98 36	6 34	Rangoon	245	+ 6 05	+ 5 19	+ 1.4	+1.2	1.02
12	Reef Island, Tavoy River Entrance	13 36	98 13	6 33	Rangoon	245	+ 6 16	+ 5 30	− 0.7	−0.9	0.88
13	Yé, Yé River	15 15	97 53	6 32	Rangoon	245	+ 7 12	+ 6 26	+ 1.4	+1.2	1.02
14	Amherst, Moulmein River	16 05	97 34	6 30	Rangoon	245	+10 06	+10 02	+ 2.4	+1.4	1.09
15	Moulmein, Moulmein River	16 29	97 37	6 30	Calcutta	249	+ 2 15	+ 1 31	+ 1.0	+0.4	1.08
16	Elephant Point, Rangoon River	16 30	96 18	6 25	Rangoon	245	− 0 57	− 1 04	+ 1.5	+1.1	1.03
17	RANGOON, Rangoon River	16 46	96 10	6 25	Rangoon	245	0 00	0 00	0.0	0.0	1.00
18	Bassein, Bassein River	16 47	94 45	6 19	Calcutta	249	+ 0 54	− 0 49	− 3.9	−0.8	0.61
19	Akyab	20 08	92 54	6 12	Calcutta	249	− 3 19	− 5 32	− 2.5	−0.1	0.70
							Time meridian, 82° 30′ East.				
20	Chittagong	22 20	91 50	6 07	Calcutta	249	+ 0 34	− 0 58	+ 2.3	+0.7	1.20
21	Dublat, Hoogly River	21 38	88 06	5 52	Calcutta	249	− 3 40	− 5 45	+ 3.0	+0.8	1.26
22	Diamond Harbor, Hoogly River	22 11	88 12	5 53	Calcutta	249	− 2 17	− 3 22	+ 4.6	+1.2	1.42
23	CALCUTTA (Kidderpore), Hoogly R.	22 33	88 19	5 53	Calcutta	249	0 00	0 00	0.0	0.0	1.00
24	False Point	20 23	86 47	5 47	Madras	253	+ 0 19	+ 0 07	+ 3.2	+0.4	2.20
25	Vizagapatam	17 41	83 17	5 33	Madras	253	+ 0 01	− 0 04	+ 1.1	+0.1	1.44
26	Cocanada	16 56	82 15	5 29	Madras	253	− 0 01	+ 0 01	+ 1.1	0.0	1.48
27	MADRAS	13 06	80 18	5 21	Madras	253	0 00	0 00	0.0	0.0	1.00
28	Negapatam	10 46	79 51	5 19	Madras	253	+ 0 04	+ 0 13	− 1.0	−0.2	0.68
29	Pamban Pass, Rámesvaram Island	9 16	79 09	5 17	Colombo	257	− 0 08	− 0 09	0.0	0.0	1.00
30	Tuticorin	8 48	78 09	5 13	Colombo	257	+ 0 11	+ 0 10	+ 0.8	+0.2	1.56
31	Trincomalee, Ceylon	8 33	81 13	5 25	Colombo	257	− 6 08	− 6 09	0.0	0.0	1.04
32	Galle, Ceylon	6 02	80 13	5 21	Colombo	257	+ 0 13	+ 0 18	− 0.1	+0.1	0.92
33	COLOMBO, Ceylon	6 56	79 51	5 19	Colombo	257	0 00	0 00	0.0	0.0	1.00
	Arabian Sea, east coast.										
34	Quilon	8 54	76 37	5 06	Yokohama	181	− 4 15	− 4 22	− 0.9	+0.6	0.74
35	Cochin	9 58	76 15	5 05	Yokohama	181	− 5 24	− 5 31	− 2.3	−0.4	0.60
36	Beypore	11 10	75 48	5 03	Yokohama	181	− 5 33	− 5 35	− 1.7	−0.3	0.76
37	Mangalore	12 52	74 50	4 59	Yokohama	181	− 6 00	− 6 02	+ 1.6	0.0	1.88
38	Kárwár	14 48	74 06	4 56	Karachi	265	− 0 09	− 0 16	− 2.0	−0.2	0.69
39	Goa, or Mormugôa	15 25	73 48	4 55	Karachi	265	− 0 08	− 0 16	− 1.8	−0.2	0.72
40	BOMBAY, Apollo Bandar	18 55	72 50	4 51	Bombay	261	0 00	0 00	0.0	0.0	1.00
41	Bhávnagar	21 48	72 09	4 49	Shanghai	193	+ 5 08	+ 4 06	+18.8	+3.0	3.15
42	Port Albert Victor (Káthiwadar)	20 58	71 33	4 46	Karachi	265	+ 3 53	+ 3 26	+ 1.8	+0.6	1.23
43	Okha Point and Bet Harbor	22 28	69 05	4 36	Bombay	261	+ 0 53	+ 0 47	− 0.9	−0.3	0.94
44	Navánár Point, Gulf of Cutch	22 44	69 43	4 39	Bombay	261	+ 1 56	+ 2 09	+ 3.9	−0.3	1.48
45	Hansthal Point, Gulf of Cutch	22 56	70 21	4 41	Bombay	261	+ 2 32	+ 3 23	+ 5.2	−0.4	1.65
46	KARACHI	24 48	66 58	4 28	Karachi	265	0 00	0 00	0.0	0.0	1.00
	Arabian Sea Islands.										
47	Suadiva Atoll, Maldive Islands	0 34	73 27	4 54	Karachi	265	+ 2 34	+ 2 30	− 3.0	−0.4	0.52
48	S. Malè Atoll, Maldive Islands	4 05	73 30	4 54	Karachi	265	+ 2 04	+ 2 00	− 3.9	−0.5	0.40
49	Malcolm Atoll, Maldive Islands	6 17	72 33	4 50	Karachi	265	− 0 17	− 0 21	− 4.0	−0.4	0.38
50	Minikoi Light	8 16	73 01	4 52	Karachi	265	+ 0 48	+ 0 52	− 4.2	−0.6	0.34
51	Kiltan Island, Laccadive Islands	11 29	73 00	4 52	Karachi	265	− 0 19	− 0 23	− 0.8	0.0	0.87
52	Cherbaniani Reef, Laccadive Ids	12 20	71 52	4 47	Karachi	265	− 0 44	− 0 48	− 1.0	0.0	0.85
	BALUCHISTAN.						*Local time.*				
53	Sunmiyani Harbor	25 25	66 35	4 26	Karachi	265	− 2 26	− 2 25	+ 0.7	+0.1	1.12
54	Gwadar Bay	25 10	62 20	4 09	Karachi	265	− 1 55	− 1 54	+ 0.6	+0.2	1.10

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
															West.
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	°
1	[11 43]	[5 18]	10 17*b*	8 11*a*	[0.6]	[0.9]	[0.2]	2.2	.....	.....	21 57	2.1	1.1	1.0	4.0
2	[10 53]	[4 40]	9 56*b*	6 34*a*	[0.5]	[1.2]	[0.1]	2.6	.....	.....	.....	2.6	1.3	1.3	4.0
3	[10 16]	[3 43]	8 32*b*	6 58*a*	[0.4]	[0.7]	[0.0]	2.1	.....	.....	20 13	2.1	1.0	1.1	4.0
4	[8 50]	[2 30]	7 40*b*	4 49*a*	[0.6]	[1.5]	[0.1]	3.0	.....	.....	.....	3.0	1.5	1.5	3.5
5	11 30	5 10	11 52*b*	5 09*a*	14.3	17.6	10.4	24.2	2.8	6.9	.....	7.4	8.8	10.6	0.0
6	11 35	5 20	11 51*b*	5 19*a*	27.8	34.3	20.3	41.7	3.8	9.6	.....	10.4	17.2	18.7	1.5E.
7	8 05	1 50	8 25*b*	1 49*a*	18.4	22.7	13.4	29.6	3.1	7.7	.....	8.5	11.4	13.1	2.5E.
															East.
8	9 05	2 52	9 04*b*	3 07*a*	5.8	8.3	2.8	6.1	1.3	0.2	.....	1.3	4.2	2.7	0.0
9	9 40	3 27	9 38*b*	3 45*a*	4.4	6.3	2.1	4.6	1.1	0.2	21 33	1.1	3.2	2.0	0.5
10	9 50	3 37	9 49*b*	3 52*a*	6.0	8.6	2.9	6.3	1.3	0.2	.....	1.3	4.3	2.8	0.5
11	10 40	4 10	10 34*a*	4 18*b*	13.0	18.0	6.9	12.2	1.6	1.3	.....	2.0	9.0	6.0	1.0
12	10 50	4 20	10 43*a*	4 29*b*	11.2	15.6	5.9	10.4	1.5	1.2	.....	1.9	7.8	5.2	1.0
13	11 45	5 15	11 39*a*	5 23*b*	13.0	18.1	6.9	12.2	1.6	1.3	.....	2.0	9.0	6.0	1.0
14	2 12	8 49	2 06*b*	8 57*b*	13.9	19.2	7.4	13.0	1.6	1.4	11 52	2.1	9.6	6.5	1.0
15	3 07	10 49	3 05*a*	11 01*a*	8.6	11.7	5.0	8.3	1.4	0.3	3 11	1.4	5.8	4.1	1.5
16	3 29	10 03	3 22*a*	10 11*a*	13.2	18.1	7.3	12.7	1.7	1.4	0 51	2.2	9.0	6.3	1.0
17	4 26	11 07	4 20*a*	11 15*a*	12.8	15.5	9.3	12.8	1.7	1.3	2 07	2.0	7.7	6.8	1.0
18	1 35	8 18	1 40*a*	8 04*b*	4.9	5.7	3.8	5.5	1.1	0.3	3 00	1.1	2.8	2.4	1.0
19	9 40	3 28	9 46*b*	3 13*b*	5.6	7.6	3.0	5.6	1.2	0.5	23 19	1.3	3.8	2.7	1.5
20	1 02	7 56	1 02*a*	7 44*b*	9.6	13.1	5.6	9.8	1.3	0.2	1 12	1.3	6.6	4.6	1.5
21	9 58	3 54	10 01*b*	3 46*b*	10.1	14.1	5.1	9.5	1.3	0.5	23 36	1.4	7.0	4.6	1.5
22	11 22	6 18	11 23*b*	6 10*a*	11.4	15.9	5.9	10.5	1.4	0.3	12 19	1.5	8.0	5.1	1.5
23	1 14	9 40	1 18*a*	9 51*a*	8.0	10.2	5.2	7.6	1.2	0.2	2 35	1.2	5.1	3.6	1.5
24	9 21	3 00	9 27*b*	2 46*b*	4.9	6.8	2.6	5.1	1.1	0.5	23 13	1.2	3.4	2.5	1.0
25	8 48	2 34	8 58*b*	2 16*b*	3.2	4.4	1.8	3.5	0.9	0.5	23 03	1.0	2.2	1.7	0.5
26	8 42	2 35	8 52*b*	2 18*b*	3.3	4.5	1.9	3.6	0.9	0.5	22 59	1.0	2.2	1.6	0.5
27	8 35	2 26	8 46*b*	2 06*b*	2.2	3.1	1.2	2.6	0.7	0.4	22 58	0.8	1.5	1.2	0.0
28	8 37	2 37	8 49*b*	2 14*b*	1.5	2.1	0.9	1.8	0.6	0.3	22 53	0.6	1.0	0.9	0.0
29	1 37	7 36	1 53*a*	6 54*b*	1.4	2.0	0.5	1.6	0.8	0.3	3 07	0.8	1.0	0.7	0.5W
															West.
30	1 52	7 51	2 05*a*	7 16*b*	2.1	3.0	0.8	2.4	1.0	0.4	.....	1.1	1.5	1.1	0.5
31	8 10	1 44	8 26*b*	1 01*b*	1.4	2.0	0.5	1.7	0.8	0.3	.....	0.9	1.0	0.8	0.5
32	2 02	8 07	2 11*a*	7 41*b*	1.2	1.9	0.4	1.2	0.4	0.2	3 19	0.4	1.0	0.6	0.5
33	1 47	7 47	1 58*a*	7 19*b*	1.4	2.0	0.5	1.8	0.6	0.3	3 15	0.7	1.0	0.8	0.5
34	0 18	6 16	1 19*a*	5 58*b*	2.0	2.5	1.3	3.2	0.7	1.9	.....	2.1	2.2	1.9	0.5
35	11 38	5 06	12 39*b*	4 44*b*	1.6	2.1	1.0	2.7	0.6	1.7	3 44	1.9	1.0	1.6	0.5
36	11 21	4 59	12 20*b*	4 41*b*	2.1	2.7	1.4	3.4	0.7	2.0	3 42	2.1	1.4	2.0	0.5
37	10 50	4 28	11 28*b*	4 16*b*	5.1	6.5	3.4	7.1	1.1	3.1	.....	3.4	3.2	4.0	0.0
38	10 34	4 11	11 24*b*	4 00*b*	3.8	5.0	2.4	5.4	0.7	3.0	3 18	3.1	2.5	3.2	0.0
															East.
39	10 34	4 10	11 24*b*	4 01*b*	4.0	5.2	2.5	5.5	0.7	3.1	3 17	3.2	2.6	3.4	0.5
40	11 27	5 07	11 53*b*	4 54*b*	8.8	11.9	4.9	11.0	2.1	3.8	3 12	4.2	6.0	5.9	0.5
41	4 27	11 18	4 33*a*	11 01*b*	23.0	29.8	15.1	25.6	6.3	2.3	5 57	6.7	14.9	11.9	1.0
42	2 01	7 43	2 27*a*	7 09*b*	6.8	9.5	3.7	9.3	3.7	2.9	4 31	4.8	4.8	4.5	1.0
43	12 05	5 39	12 33*b*	5 25*b*	8.2	10.8	5.2	10.6	2.0	3.8	3 46	4.3	5.4	5.7	1.0
44	0 46	7 04	1 02*a*	6 51*b*	13.0	15.5	9.8	15.4	2.8	3.6	4 24	4.5	7.8	7.9	1.0
45	1 24	8 20	1 41*a*	8 06*b*	14.5	16.8	11.6	16.5	2.5	3.4	5 20	4.6	8.4	8.5	1.0
46	10 14	3 58	11 00*b*	3 50*b*	5.6	7.4	3.5	7.5	0.8	4.0	3 11	4.0	3.7	4.4	1.5
															West.
47	0 50	6 55	1 34*a*	6 36*b*	2.9	3.8	1.8	4.3	1.0	2.1	.....	2.6	1.9	2.4	2.0
48	0 20	6 25	1 10*a*	6 04*b*	2.2	2.9	1.4	3.4	0.8	1.8	.....	2.2	1.4	1.9	1.0
49	10 20	4 00	11 12*b*	3 38*b*	2.1	2.7	1.3	3.3	0.8	1.8	.....	2.2	1.4	1.8	1.0
50	11 27	5 15	12 22*b*	4 51*b*	1.9	2.5	1.2	3.0	0.8	1.7	0 50	2.1	1.2	1.7	1.0
51	10 20	4 00	10 54*b*	3 46*b*	4.8	6.3	3.0	6.5	1.2	2.6	.....	3.3	3.2	3.5	0.5
52	9 50	3 30	10 26*b*	3 15*b*	4.7	6.2	2.9	6.5	1.2	2.6	.....	3.3	3.1	3.4	0.5
															East.
53	8 50	2 35	9 35*b*	2 30*b*	6.2	8.1	3.8	8.2	0.8	4.1	.....	4.2	4.0	4.8	2.0
54	9 20	3 05	10 08*b*	2 59*b*	6.1	8.1	3.7	8.3	0.7	4.5	.....	4.5	4.0	5.0	1.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	ASIA (SOUTH COAST)—Continued.										
	PERSIA.										
	Persian Gulf.	*North.*	*East.*				*Local time.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Jashak Bay	25 40	57 50	3 51	Karachi	265	− 1 55	− 1 54	+0.4	+0.2	1.06
2	Kishm	26 56	56 15	3 45	Karachi	265	− 0 25	− 0 24	+3.8	+0.6	1.57
3	Jezirat Kais	26 32	53 54	3 36	Hongkong	201	− 9 08	− 8 56	+1.6	−0.4	1.60
4	Bushire	29 00	50 52	3 23	Hongkong	201	− 2 26	− 1 58	−2.0	−0.8	0.64
5	Euphrates River Entrance	29 51	48 45	3 15	Hongkong	201	+ 1 43	+ 2 50	+4.2	−0.2	2.30
	ARABIA.										
	Persian Gulf.										
6	Kuweit	29 24	47 58	3 12	Hongkong	201	+ 2 58	+ 3 07	+3.2	−0.2	2.08
7	Menama, Bahrein Harbor	26 16	50 39	3 23	Hongkong	201	− 4 23	− 4 06	+1.4	−0.4	1.57
8	Maskat	23 37	58 35	3 54	Karachi	265	− 1 45	− 1 39	−1.1	−0.1	0.82
	Outer coast.										
9	Ras-al-Hadd	22 34	59 50	3 59	Karachi	265	− 2 00	− 1 56	+1.4	+0.2	1.21
10	Masira Island	20 28	58 57	3 56	Karachi	265	− 1 30	− 1 27	+2.0	+0.4	1.30
11	Merbat	17 00	54 41	3 39	Aden	269	+ 1 01	+ 1 00	+1.9	+0.3	1.44
12	Makalla	14 32	49 06	3 16	Aden	269	+ 0 31	+ 0 29	+1.7	+0.3	1.38
13	ADEN	12 47	44 59	3 00	Aden	269	0 00	0 00	0.0	0.0	1.00
	Red Sea, east coast.										
14	Mocha or Mokha	13 19	43 12	2 53	Aden	269	+ 3 57	+ 3 56	−0.4	0.0	0.91
15	Loheiya	15 45	42 40	2 51	Aden	269	+ 5 52	+ 5 50	−1.7	−0.3	0.61
16	Jidda	21 28	39 08	2 37	Aden	269	+ 8 08	+ 8 06	−2.4	−0.4	0.41
17	Hassani Island	25 00	37 00	2 28	Aden	269	+10 23	+10 21	−1.4	−0.2	0.64
18	Akabah	29 30	35 00	2 20	Aden	269	−10 12	−10 13	−0.8	0.0	0.80
	AFRICA (EAST COAST).										
	EGYPT, ABYSSINIA, ETC.										
	Red Sea, west coast.										
19	Suez	29 56	32 33	2 10	Aden	269	− 9 26	− 9 28	+1.7	+0.3	1.38
20	Zafarana Light	29 06	32 40	2 11	Aden	269	− 9 31	− 9 32	+0.6	+0.2	1.13
21	Ras Gharib	28 21	33 06	2 12	Aden	269	− 9 36	− 9 37	−2.8	−0.4	0.30
22	Brothers Islands	26 19	34 51	2 19	Aden	269	+11 18	+11 17	−2.4	−0.4	0.41
23	Suakin	19 06	37 19	2 29	Aden	269	+ 6 48	+ 6 46	−2.8	−0.4	0.36
24	Massaua or Massowah	15 37	39 27	2 38	Aden	269	+ 5 23	+ 5 21	−0.7	−0.1	0.83
25	Perim Island, Bab el Mandeb Str.	12 38	43 24	2 54	Aden	269	+ 0 02	+ 0 01	+2.0	+0.4	1.46
	SOMALILAND.										
26	Zeila	11 24	43 28	2 54	Aden	269	− 0 18	− 0 19	+3.1	+0.5	1.71
27	Cape Guardafui or Ras Asir	11 53	51 15	3 25	Aden	269	− 1 49	− 1 51	+1.0	+0.2	1.24
28	Sokotra Island	12 40	53 55	3 36	Aden	269	− 0 44	− 0 21	+2.4	+0.4	1.55
29	Warsheik Road	2 36	46 11	3 05	Aden	269	− 3 28	− 3 30	+2.6	+0.4	1.60
30	Brava	1 08	44 04	2 56	Aden	269	− 3 33	− 3 35	+2.4	+0.4	1.55
	ZANZIBAR.	*South.*									
31	Juba	0 14	42 38	2 51	Aden	269	− 3 31	− 3 33	+3.6	+0.6	1.85
32	Port Durnford	1 13	41 55	2 48	Aden	269	− 3 18	− 3 20	+6.0	+0.8	2.40
33	Malindi	3 07	40 11	2 41	Aden	269	− 3 47	− 3 48	+6.3	+0.9	2.49
34	Zanzibar	6 09	39 11	2 37	Aden	269	− 3 42	− 3 44	+8.4	+1.2	2.96
35	Lindi River Entrance	10 00	39 44	2 39	Aden	269	− 3 52	− 3 53	+5.2	+0.8	2.24
	MOZAMBIQUE.										
36	Cape Delgado	10 41	40 39	2 43	Calcutta	249	+ 3 14	+ 1 00	+0.4	+0.6	0.98
37	Mozambique Harbor	14 58	40 44	2 43	Calcutta	249	+ 3 15	+ 1 01	+0.8	+0.8	1.01
38	Zambezi River Entrance	18 47	36 30	2 26	Calcutta	249	+ 3 31	+ 1 17	+2.4	+1.0	1.16
39	Innamban River Entrance	23 45	35 32	2 22	Calcutta	249	+ 3 46	+ 1 32	+0.2	+0.6	0.96
40	English River, Delagoa Bay	25 59	32 36	2 10	Calcutta	249	+ 4 26	+ 2 12	+1.0	+0.8	1.02
	ISLANDS IN THE INDIAN OCEAN.										
	Madagascar.										
41	Diego Suarez Bay	12 15	49 30	3 18	Calcutta	249	+ 2 39	+ 0 25	−3.7	−0.1	0.55
42	Port Choiseul, Antongil Bay	15 29	49 50	3 19	Calcutta	249	+ 2 59	+ 0 45	4.8	−0.2	0.44
43	Tamatave	18 08	49 26	3 18	Calcutta	249	+ 3 14	+ 1 00	−3.0	0.0	0.62
44	Fort Dauphin	25 01	47 01	3 08	Calcutta	249	+ 3 30	+ 1 16	−5.1	−0.3	0.40
45	St. Augustine Bay	23 34	43 46	2 55	Calcutta	249	+ 4 55	+ 2 41	−0.8	+0.4	0.85
46	Bembatooka Bay	15 50	46 21	3 05	Calcutta	249	+ 3 30	+ 2 17	0.0	+0.6	0.94

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	East. °
1	9 20	3 05	10 09*b*	2 59*b*	5.9	7.8	3.6	8.1	0.7	4.4	.....	4.5	3.9	4.8	1.5
2	10 50	4 35	11 30*b*	4 30*b*	8.7	11.6	5.3	11.3	0.8	5.3	.....	5.4	5.8	6.6	1.5
3	0 30	6 40	0 17*b*	7 37*b*	5.3	6.6	3.8	8.0	4.5	1.2	.....	4.7	3.3	3.4	1.0
4	7 12	1 13	6 51*b*	2 44*b*	2.1	2.6	1.5	3.8	2.8	0.7	18 24	3.0	1.3	1.5	1.0
5	11 20	6 00	11 09*b*	6 48*a*	7.6	9.4	5.4	10.9	5.4	1.4	.....	5.7	4.7	4.7	1.0
6	0 05	6 17	— 0 07*a*	7 07*a*	6.7	8.3	4.8	9.7	4.9	1.8	.....	5.3	4.2	4.2	1.0 W.
7	5 15	11 30	5 01*b*	12 23*b*	5.2	6.4	3.7	7.9	4.4	1.2	.....	4.7	3.2	3.4	0.5 E.
8	9 30	3 20	10 26*b*	3 13*b*	4.6	6.0	2.8	6.5	0.6	3.9	2 44	3.9	3.0	3.9	1.0 E.
9	9 15	3 08	10 02*b*	2 57*b*	6.7	8.9	4.1	9.0	0.7	4.7	.....	4.8	4.4	5.4	1.0 E.
10	9 45	3 32	10 29*b*	3 27*b*	7.2	9.6	4.4	9.7	0.8	4.9	.....	4.9	4.8	5.7	1.0 E.
11	8 50	2 38	7 49*a*	2 50*b*	5.2	7.0	2.9	7.6	1.0	4.8	.....	4.8	3.5	4.6	0.0
12	8 20	2 07	7 18*a*	2 19*b*	5.0	6.8	2.8	7.4	1.0	4.7	.....	4.7	3.4	4.5	1.0 W.
13	7 48	1 37	6 34*a*	1 50*b*	3.6	4.8	2.0	5.8	0.9	4.0	2 28	4.0	2.4	3.5	2.0 W.
14	11 45	5 33	10 29*a*	5 48*b*	3.3	4.5	1.9	5.2	0.8	3.8	.....	3.8	2.2	3.2	West. 2.0
15	1 15	7 27	— 0 18*b*	7 45*b*	2.2	2.9	1.2	3.7	0.7	3.1	.....	3.1	1.4	2.4	2.0
16	3 30	9 42	1 36*b*	10 04*b*	1.5	2.0	0.8	3.0	0.6	2.6	.....	2.6	1.0	1.8	2.0
17	5 45	11 57	4 13*b*	12 15*b*	2.3	3.1	1.3	3.9	0.7	3.2	.....	3.2	1.6	2.5	2.0
18	10 00	3 48	8 38*b*	4 04*a*	2.9	3.9	1.6	4.7	0.8	3.6	.....	3.6	2.0	3.0	2.0
19	10 45	4 32	9 43*b*	4 44*a*	5.0	6.8	2.8	7.4	1.0	4.7	.....	4.7	3.4	4.5	3.0
20	10 40	4 28	9 31*b*	4 42*a*	4.1	5.5	2.3	6.3	0.9	4.3	.....	4.3	2.8	3.9	2.5
21	10 35	4 23	8 23*b*	4 49*a*	1.1	1.5	0.6	2.2	0.5	2.2	.....	2.2	0.8	1.5	2.5
22	6 40	0 28	4 46*b*	0 50*a*	1.5	2.0	0.8	2.3	0.6	2.6	.....	2.6	1.0	1.8	2.5
23	2 10	8 22	0 08*b*	8 46*b*	1.3	1.7	0.7	2.7	0.5	2.4	.....	2.4	0.8	1.7	3.0
24	0 45	6 57	— 0 36*b*	7 13*b*	3.0	4.0	1.7	4.7	0.8	3.7	.....	3.7	2.0	3.1	3.0
25	7 50	1 38	6 51*a*	1 50*b*	5.3	7.2	3.0	7.8	1.1	4.9	.....	4.9	3.6	4.7	2.5
26	7 30	1 18	6 34*a*	1 29*b*	6.2	8.5	3.5	9.0	1.2	5.3	.....	5.3	4.2	5.2	2.5
27	6 00	12 12	4 54*a*	12 25*a*	4.5	6.1	2.5	6.8	1.0	4.5	.....	4.5	3.0	4.0	1.0
28	7 05	1 17	6 06*a*	1 29*b*	5.6	7.5	3.1	8.2	1.1	5.0	.....	5.0	3.8	4.8	0.5
29	4 20	10 32	3 23*a*	10 43*a*	5.8	7.8	3.3	8.4	1.1	5.0	.....	5.0	3.9	4.9	3.5
30	4 15	10 27	3 16*a*	10 39*a*	5.6	7.5	3.1	8.2	1.1	5.0	.....	5.0	3.8	4.8	4.0
31	4 17	10 29	3 24*a*	10 40*a*	6.7	9.0	3.8	9.4	1.2	5.4	.....	5.4	4.5	5.5	4.5
32	4 30	10 42	3 43*a*	10 51*a*	8.7	11.7	4.9	11.9	1.4	6.2	.....	6.2	5.8	7.0	4.5
33	4 00	10 13	3 14*a*	10 22*a*	9.0	12.1	5.0	12.2	1.4	6.3	.....	6.3	6.0	7.1	5.5
34	4 05	10 17	3 23*a*	10 25*a*	10.7	14.5	6.0	14.2	1.5	6.9	.....	6.9	7.2	8.1	6.5
35	3 55	10 08	3 06*a*	10 18*a*	8.1	10.9	4.5	11.2	1.3	6.0	.....	6.0	5.4	6.5	7.5
36	3 59	10 11	4 00*a*	10 04*a*	7.8	11.3	3.3	9.0	0.6	0.2	.....	0.7	5.6	4.5	7.5
37	4 00	10 12	4 01*a*	10 06*a*	8.1	11.8	3.4	9.3	0.6	0.2	.....	0.7	5.9	4.6	9.5
38	4 15	10 27	4 16*a*	10 21*a*	9.3	13.5	3.9	10.6	0.7	0.2	.....	0.7	6.8	5.2	13.0
39	4 30	10 42	4 31*a*	10 36*a*	7.7	11.0	3.2	8.9	0.6	0.2	.....	0.6	5.5	4.4	17.0
40	5 10	11 22	5 11*a*	11 16*a*	8.2	11.9	3.4	9.5	0.7	0.2	.....	0.7	6.0	4.7	20.0
41	3 25	9 37	3 27*a*	9 29*a*	4.4	6.3	1.9	5.3	0.5	0.1	.....	0.5	3.2	2.5	6.0
42	3 45	9 57	3 47*a*	9 49*a*	3.5	5.1	1.5	4.2	0.4	0.1	.....	0.4	2.6	2.1	7.0
43	4 00	10 12	4 02*a*	10 05*a*	5.0	7.3	2.1	5.9	0.5	0.1	.....	0.5	3.6	2.8	8.5
44	4 15	10 27	4 17*a*	10 18*a*	3.2	4.7	1.3	3.9	0.4	0.1	.....	0.4	2.4	1.9	14.0
45	5 40	11 52	5 41*a*	11 45*a*	6.8	9.8	2.9	8.0	0.6	0.2	.....	0.6	4.9	4.0	14.0
46	4 15	11 28	4 16*a*	11 22*a*	7.5	10.9	3.2	8.7	0.6	0.2	.....	0.6	5.4	4.3	8.5

Number.	Station.	Geographic position. Latitude.	Longitude. Arc.	Longitude. Time.	Standard port for reference. Name.	Page.	Tidal differences. Time. HW.	Time. LW.	Height. HW.	Height. LW.	Ratio of ranges.
	AFRICA (EAST COAST)—Cont'd.										
	ISLANDS IN THE INDIAN OCEAN—continued.										
	Lesser Islands.	*South.*	*East.*				*Local time.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Maroni Bay, Comoro Islands	11 41	43 21	2 53	Singapore	205	+6 58	+7 04	+1.4	+0.4	1.15
2	Zaudzi, Mayotta Island	12 50	45 16	3 01	Singapore	205	+6 13	+6 19	+3.0	+0.8	1.39
3	St. Pierre, Reunion or Bourbon I.	21 16	55 35	3 42	Singapore	205	+1 36	+1 42	−4.0	−0.8	0.40
4	Port Louis, Mauritius Island	20 08	57 29	3 50	Singapore	205	+2 59	+3 04	−5.6	−1.2	0.19
5	Cargados, Carajos Shoals	16 36	59 45	3 59	Halifax	57	−6 13	−5 33	−1.4	+0.2	0.66
6	Rodriguez Island	19 45	63 25	4 14	Halifax	57	+4 41	+4 20	0.0	+0.4	0.89
7	Providence Island	9 13	51 01	3 24	Halifax	57	−2 12	−2 32	+1.8	+0.8	1.26
8	Mahé Island, Seychelle Islands	4 36	55 32	3 42	Halifax	57	−3 41	−4 01	−1.1	+0.3	0.68
9	Diego Garcia I., Chagos Islands	7 19	72 29	4 50	Halifax	57	+5 50	+5 30	+0.2	+0.4	0.94
10	Keeling Islands	12 07	96 55	6 28	Halifax	57	−2 50	−3 14	−0.4	+0.4	0.82
11	Christmas Island	11 30	105 30	7 02	Halifax	57	−1 00	−1 18	−1.0	+0.2	0.73
12	Amsterdam Island	37 50	77 33	5 10	Halifax	57	+2 44	+2 24	−2.0	0.0	0.54
13	St. Paul Island	38 39	77 34	5 10	Halifax	57	+2 34	+2 14	−2.2	0.0	0.49
14	Betsy Cove, Kerguelen Island	49 09	70 12	4 41	Halifax	57	+4 34	+4 23	−0.8	+0.2	0.75
	AFRICA (EAST AND SOUTH COASTS).										
	NATAL AND CAPE COLONY.										
15	Durban (Port Natal)	29 53	31 04	2 04	Cape Town	273	+2 22	+2 24	+0.7	+0.3	1.12
16	East London, Buffalo River	33 02	27 55	1 52	Cape Town	273	+2 02	+2 04	+0.2	+0.2	1.06
17	Port Elizabeth, Algoa Bay	33 58	25 37	1 42	Cape Town	273	+1 46	+1 47	+0.6	+0.2	1.15
18	Aliwal Harbor, Mossel Bay	34 11	22 09	1 29	Cape Town	273	+1 43	+1 45	+0.8	+0.2	1.18
19	Cape Agulhas	34 50	20 01	1 20	Cape Town	273	+1 06	+1 08	+0.5	+0.1	1.15
20	Roman Rocks, Simons Bay	34 11	18 27	1 14	Cape Town	273	+1 01	+1 03	+0.5	+0.1	1.15
21	CAPE TOWN, Table Bay	33 54	18 25	1 14	Cape Town	273	0 00	0 00	0.0	0.0	1.00
22	Saldanha Bay	33 05	17 58	1 12	Cape Town	273	+0 46	+0 48	+0.4	+0.2	1.12
23	Port Nolloth	29 15	16 51	1 07	Cape Town	273	+0 51	+0 53	+0.6	0.0	1.18
	AFRICA (WEST COAST).										
	ORANGE RIVER TO KONGO RIVER.										
24	Elizabeth Bay	26 51	15 11	1 01	Cape Town	273	+1 01	+1 02	+0.8	+0.2	1.21
25	Port d'Ilheo	23 20	14 28	0 58	Cape Town	273	+1 17	+1 19	+3.9	+0.5	2.00
26	Great Fish Bay	16 40	11 52	0 47	Cape Town	273	+1 27	+1 28	+0.9	+0.1	1.26
27	Benguela	12 34	13 23	0 54	Cape Town	273	+1 57	+1 59	+0.8	+0.2	1.21
28	Loanda	8 43	13 21	0 53	Cape Town	273	+2 07	+2 09	+0.2	0.0	1.06
29	Kongo River Entrance	6 07	12 22	0 49	Cape Town	273	+2 37	+2 41	+1.2	+0.2	1.32
	GUINEA.										
30	Loango Bay	4 38	11 46	0 47	Cape Town	273	+2 40	+2 42	+1.6	+0.2	1.44
31	Mayumba	3 21	10 40	0 43	Cape Town	273	+2 52	+2 54	+2.1	+0.3	1.56
32	Cape Lopez	0 48	8 42	0 35	Cape Town	273	+2 57	+2 59	+0.5	+0.1	1.15
		North.									
33	River Gaboon Entrance	0 23	9 26	0 38	Cape Town	273	+3 37	+3 40	+3.0	+0.4	1.76
34	Kamerun River Entrance	3 52	9 38	0 39	Cape Town	273	+3 32	+3 34	+2.3	+0.3	1.62
35	Niger River, Nun Entrance	4 17	6 05	0 24	Cape Town	273	+3 18	+3 20	+0.7	+0.1	1.21
36	Lagos River Entrance	6 25	3 25	0 14	Cape Town	273	+3 18	+3 22	−1.2	−0.2	0.74
37	Volta River Entrance	5 47	0 41	0 03	Cape Town	273	+2 48	+2 50	−0.4	0.0	0.94
			West.								
38	Cape Coast Castle	5 06	1 14	0 05	Cape Town	273	+2 49	+2 50	+1.2	+0.2	1.32
39	Cape Three Points	4 45	2 06	0 08	Cape Town	273	+2 29	+2 31	+0.1	+0.1	1.03
40	Grand Lahu	5 10	5 08	0 20	Cape Town	273	+2 39	+2 41	−0.2	0.0	0.97
	LIBERIA.										
41	Cape Palmas	4 22	7 44	0 31	Cape Town	273	+2 59	+3 01	−0.2	0.0	0.94
42	Sinu	5 00	9 08	0 37	Cape Town	273	+3 20	+3 24	+0.2	0.0	1.06
43	Monrovia	6 19	10 49	0 43	Cape Town	273	+4 06	+4 25	−1.3	−0.2	0.6.
	SIERRA LEONE.										
44	Sherbro River, Buoy Point	7 42	12 42	0 51	Cape Town	273	+6 15	+6 19	+5.0	+0.8	2.29
45	Freetown or Sierra Leone	8 30	13 17	0 53	Cape Town	273	+6 10	+6 14	+0.1	+0.9	2.56
46	Ponga River	10 09	14 00	0 56	Cape Town	273	+6 00	+6 04	+6.0	+0.8	2.58
	SENEGAMBIA.										
47	Bissao, Jeba River	11 39	16 01	1 04	Cape Town	273	+9 16	+9 20	+2.2	+0.4	1.59
48	Bathurst, Gambia River	13 28	16 42	1 07	Cape Town	273	+7 31	+7 35	+1.2	+0.2	1.29
49	Senegal River Entrance	16 40	16 30	1 06	Cape Town	273	+7 01	+7 05	+1.2	+0.2	1.32
50	St. Louis, Senegal River	16 11	16 00	1 04	Cape Town	273	+8 21	+8 25	+1.2	+0.2	1.29

Number	Interval. Mean. HWI.	Interval. Mean. LWI.	Interval. Tropic. HHWI.	Interval. Tropic. LLWI.	Range of tide. Mean (Mn).	Range of tide. Spring (Sg).	Range of tide. Neap (Np).	Range of tide. Great tropic (Gc).	Tropic diurnal inequality. HWQ.	Tropic diurnal inequality. LWQ.	Diurnal wave. Tropic HW interval.	Diurnal wave. Tropic range.	Mean sea level above plane of— Predictions.	Mean sea level above plane of— Tropic LLW.	Variation of the compass.
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	4 45	10 58	4 17*b*	11 02*b*	6.6	10.0	1.7	7.1	0.3	2.0	.....	2.0	5.0	3.9	7.0
2	4 00	10 13	3 34*b*	10 16*b*	7.9	11.9	2.0	8.4	0.3	2.2	.....	2.1	6.0	4.5	7.5
3	11 50	5 38	11 04*a*	5 44*b*	2.3	3.5	0.6	2.6	0.1	1.2	.....	1.1	1.8	1.5	9.0
4	0 48	7 00	— 0 22*b*	7 09*b*	1.1	1.6	0.3	1.2	0.1	0.8	7 29	0.8	0.8	0.7	8.5
5	1 50	8 03	1 33*b*	8 07*b*	2.8	4.0	1.2	2.7	0.2	0.7	.....	0.7	2.0	1.4	6.5
6	0 20	6 32	0 06*b*	6 36*b*	3.8	5.5	1.6	3.6	0.2	0.8	.....	0.8	2.8	2.0	8.5
7	5 50	12 03	5 37*b*	12 06*b*	5.4	7.8	2.3	5.2	0.3	0.9	.....	1.0	3.9	2.8	4.5
8	4 22	10 35	4 05*b*	10 39*b*	2.9	4.3	1.2	2.8	0.2	0.7	.....	0.7	2.2	1.5	3.5
9	1 30	7 43	1 16*b*	7 46*b*	4.0	5.8	1.7	3.8	0.2	0.8	.....	0.8	2.9	2.1	3.5
10	5 20	11 32	5 04*b*	11 36*b*	3.5	5.1	1.5	3.4	0.2	0.7	.....	0.8	2.6	1.8	3.0
11	7 10	1 00	6 54*b*	1 04*a*	3.1	4.5	1.3	3.0	0.2	0.7	.....	0.7	2.2	1.6	1.0
12	10 50	4 38	10 32*b*	4 42*a*	2.3	3.3	1.0	2.2	0.2	0.6	.....	0.6	1.6	1.2	25.5
13	10 40	4 28	10 20*b*	4 33*a*	2.1	3.0	0.9	2.0	0.2	0.7	.....	0.6	1.5	1.2	26.0
14	0 14	6 36	— 0 02*a*	6 40*a*	3.2	4.6	1.3	3.1	0.2	0.7	19 52	0.7	2.3	1.6	36.5
15	3 58	10 11	4 00*b*	10 02*b*	3.8	5.6	1.6	4.7	0.4	0.1	17 10	0.5	2.8	2.2	22.5
16	3 37	9 50	3 35*b*	9 58*b*	3.6	5.0	1.8	4.3	0.4	0.1	.....	0.4	2.5	2.1	25.0
17	3 21	9 33	3 19*b*	9 41*b*	3.9	5.4	1.9	4.6	0.4	0.1	14 34	0.4	2.7	2.2	26.0
18	3 18	9 31	3 16*b*	9 38*b*	4.0	5.6	2.0	4.7	0.4	0.1	.....	0.4	2.8	2.3	27.5
19	2 40	8 53	2 37*b*	9 02*b*	3.9	5.2	2.2	4.8	0.5	0.2	.....	0.5	2.6	2.4	28.5
20	2 35	8 48	2 32*b*	8 57*b*	3.9	5.2	2.2	4.7	0.5	0.1	.....	0.5	2.6	2.1	28.5
21	1 34	7 45	1 31*b*	7 52*b*	3.4	4.7	1.9	4.2	0.5	0.2	12 39	0.5	2.3	2.0	28.0
22	2 20	8 33	2 17*b*	8 42*b*	3.8	5.1	2.1	4.5	0.5	0.1	.....	0.5	2.6	2.1	28.0
23	2 25	8 38	2 23*b*	8 46*b*	4.0	5.3	2.2	4.7	0.5	0.1	.....	0.5	2.6	2.1	26.0
24	2 35	8 47	2 33*b*	8 55*b*	4.1	5.5	2.3	4.8	0.5	0.1	.....	0.5	2.8	2.2	25.0
25	2 50	9 03	2 48*b*	9 10*b*	6.8	9.0	3.7	7.8	0.6	0.2	.....	0.7	4.5	3.8	23.5
26	3 00	9 12	2 58*b*	9 20*b*	4.3	5.7	2.4	5.0	0.5	0.1	.....	0.5	2.8	2.3	20.5
27	3 30	9 43	3 28*b*	9 51*b*	4.1	5.5	2.3	4.8	0.5	0.1	.....	0.5	2.8	2.2	18.0
28	3 40	9 53	3 37*b*	10 02*b*	3.6	4.8	2.0	4.3	0.5	0.1	.....	0.5	2.4	2.0	16.0
29	4 10	10 25	4 08*b*	10 32*b*	4.5	6.0	2.5	5.4	0.5	0.2	.....	0.5	3.0	2.3	15.0
30	4 18	10 26	4 11*b*	10 34*b*	4.9	6.5	2.7	5.8	0.5	0.2	.....	0.6	3.2	2.8	14.5
31	4 25	10 38	4 23*b*	10 45*b*	5.3	7.0	2.9	6.3	0.6	0.2	.....	0.6	3.5	3.0	14.5
32	4 30	10 43	4 27*b*	10 52*b*	3.9	5.2	2.2	4.6	0.5	0.1	.....	0.5	2.6	2.0	14.0
33	5 10	11 24	5 08*b*	11 31*b*	6.0	8.0	3.3	7.0	0.6	0.2	.....	0.6	4.0	3.4	13.5
34	5 05	11 18	5 03*b*	11 25*b*	5.5	7.3	3.0	6.5	0.6	0.2	.....	0.6	3.6	3.2	13.0
35	4 50	11 03	4 48*b*	11 11*b*	4.1	5.4	2.3	4.8	0.5	0.1	.....	0.5	2.7	2.2	13.5
36	4 50	11 05	4 47*b*	11 16*b*	2.5	3.3	1.3	3.1	0.4	0.1	.....	0.4	1.6	1.4	13.5
37	4 20	10 33	4 17*b*	10 44*b*	3.2	4.2	1.8	3.8	0.4	0.1	.....	0.5	2.1	1.8	14.5
38	4 20	10 32	4 18*b*	10 39*b*	4.5	6.0	2.5	5.4	0.5	0.2	.....	0.5	3.0	2.3	15.5
39	4 00	10 13	3 57*b*	10 22*b*	3.5	4.7	1.9	4.2	0.5	0.1	.....	0.5	2.4	2.0	16.0
40	4 10	10 23	4 07*b*	10 33*b*	3.3	4.4	1.8	3.9	0.4	0.1	.....	0.5	2.2	1.9	17.0
41	4 30	10 43	4 27*b*	10 54*b*	3.2	4.3	1.8	3.8	0.4	0.1	.....	0.5	2.2	1.8	17.5
42	4 50	11 05	4 47*b*	11 14*b*	3.6	4.8	2.0	4.3	0.5	0.1	.....	0.5	2.4	2.0	18.0
43	5 36	12 06	5 18*b*	11 50*a*	2.3	3.0	1.5	2.6	0.3	0.5	.....	0.6	1.5	1.3	18.0
44	7 45	1 35	7 41*b*	1 39*a*	7.8	10.4	4.8	7.9	0.6	0.4	.....	0.6	5.2	3.9	18.0
45	7 40	1 30	7 36*b*	1 34*a*	8.7	11.6	5.3	8.8	0.6	0.4	.....	0.7	5.8	4.3	18.0
46	7 30	1 20	7 27*b*	1 24*a*	8.6	11.4	5.2	8.7	0.6	0.4	.....	0.6	5.7	4.3	18.0
47	10 45	4 35	10 41*b*	4 40*a*	5.4	7.2	3.3	5.5	0.5	0.3	.....	0.5	3.6	2.7	18.0
48	9 00	2 50	8 55*b*	2 56*a*	4.4	5.9	2.7	4.5	0.5	0.3	.....	0.5	3.0	2.2	18.0
49	8 30	2 20	8 25*b*	2 26*a*	4.5	6.0	2.7	4.6	0.5	0.3	.....	0.5	3.0	2.2	18.0
50	9 50	3 40	9 45*b*	3 46*a*	4.4	5.9	2.7	4.5	0.5	0.3	.....	0.5	3.0	2.2	18.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	AFRICA (WEST COAST)—Cont'd.								*Mean Low Water Springs.*		
	SAHARA.	*North.*	*West.*				*Local time.*				
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Cape Blanco	20 49	17 06	1 08	Cape Town	273	+10 06	+10 08	+0.8	+0.2	1.21
2	Cape Bojador	26 10	14 29	0 58	Cape Town	273	+10 20	+10 22	+2.3	+0.3	1.62
3	Cape Juby	27 57	12 54	0 52	Cape Town	273	+10 25	+10 27	+3.4	+0.4	1.88
	ISLANDS.	*South.*									
4	Tristan da Cunha Island	37 10	12 15	0 49	Cape Town	273	+10 20	+10 24	+0.5	+0.1	1.15
5	St. Helena Island	15 54	5 44	0 23	Cape Town	273	+ 1 29	+ 1 28	−0.6	+0.8	0.62
6	Ascension Island	7 55	14 25	0 58	Cape Town	273	+ 3 50	+ 3 49	−2.3	−0.3	0.44
	Cape Verde Islands.	*North.*									
7	Porto Praya, St. Jago Island	14 53	23 31	1 34	Cape Town	273	+ 4 22	+ 4 21	+0.2	0.0	1.06
8	Do Sino Point, Sal Island	16 34	22 56	1 32	Cape Town	273	+ 6 02	+ 6 06	−0.2	0.0	0.97
9	Porto Grande, St. Vincent Island	16 53	25 00	1 40	Cape Town	273	+ 4 22	+ 4 21	−1.2	−0.2	0.74
	Canary Islands.										
10	Santa Cruz, Palma Island	28 40	17 45	1 11	Cape Town	273	− 1 09	− 1 10	+3.5	+0.5	1.91
11	Santa Cruz, Teneriffe Island	28 28	16 15	1 05	Cape Town	273	− 0 14	− 0 13	+2.8	+0.4	1.74
12	Puerto de la Luz, Gran Canaria I	28 09	15 25	1 02	Cape Town	273	− 0 49	− 0 50	+4.0	+0.6	2.06
13	Port Naos, Lanzarote Island	28 57	13 33	0 54	Cape Town	273	− 0 40	− 0 41	+3.4	+0.4	1.88
	Madeira Islands.										
14	Funchal Bay, Madeira Island	32 38	16 55	1 08	Cape Town	273	− 0 54	− 0 53	+1.8	+0.2	1.47
15	Porto Santo Bay	33 05	16 22	1 06	Cape Town	273	− 0 49	− 0 48	+1.8	+0.2	1.47
	Azore Islands.										
16	Horta Bay, Fayal Island	38 32	28 38	1 55	Cape Town	273	− 2 23	− 2 27	−6.6	0.0	0.85
17	Angra Bay, Terceira Island	38 38	27 14	1 49	Cape Town	273	− 1 08	− 1 07	−0.2	0.0	0.97
18	Arnel Point, San Miguel Island	37 49	25 08	1 41	Cape Town	273	− 1 13	− 1 12	+0.9	+0.1	1.26
	AFRICA (NORTH COAST).										
	MOROCCO.										
19	Santa Cruz or Agadir	30 29	9 35	0 38	Lisbon	277	− 1 34	− 1 04	−2.8	−0.4	0.74
20	Mogador	31 31	9 43	0 39	Lisbon	277	− 0 59	− 0 29	−1.0	−0.2	0.92
21	Rabat	34 04	6 46	0 27	Lisbon	277	− 0 29	− 0 01	−1.4	−0.2	0.88
22	Tangier, Gibraltar Strait	35 47	5 48	0 23	Lisbon	277	− 0 34	− 0 06	−3.4	−0.6	0.67
23	Ceuta, Gibraltar Strait	35 54	5 17	0 21	Cape Town	273	+ 0 24	+ 0 25	−1.2	−0.2	0.74
	Mediterranean Sea.					•					
24	Tetuan	35 37	5 11	0 21	Colombo	257	+ 0 14	+ 0 26	+0.4	0.0	1.33
25	Gomera	35 10	4 18	0 17	Colombo	257	+ 0 21	+ 0 23	+0.1	−0.1	1.19
26	Melilla	35 18	2 57	0 12	Colombo	257	+ 0 24	+ 0 36	+0.2	0.0	1.26
	ALGERIA.		*East.*								
27	Cape Ivi	36 07	0 13	0 01	Colombo	257	+ 0 40	+ 0 52	+0.4	0.0	1.33
28	Algiers	36 47	3 04	0 12	Colombo	257	+ 0 59	+ 1 11	+0.6	0.0	1.48
29	Port Collo	37 00	6 35	0 26	Colombo	257	+ 0 21	+ 1 33	+0.8	0.0	1.63
	TUNIS.										
30	Goletta, Tunis Entrance	36 48	10 18	0 41	Colombo	257	+ 1 45	+ 2 07	+0.8	+0.2	1.56
31	Sfax Road	34 44	10 46	0 43	Colombo	257	+ 1 47	+ 2 09	+1.8	+0.3	2.15
32	Nathor, Surkenis Bay	34 15	10 04	0 40	Colombo	257	+ 2 02	+ 2 14	+2.8	+0.6	2.74
33	Humt Suk, Jerba Island	33 53	10 51	0 43	Colombo	257	+ 2 22	+ 2 35	+2.6	+0.6	2.59
34	Zarzis	33 30	11 07	0 44	Colombo	257	+ 1 12	+ 1 24	+0.2	0.0	1.11
	TRIPOLI.										
35	Benghazi	32 07	20 03	1 20	Colombo	257	+ 8 05	+ 8 20	−0.7	−0.1	0.59
	EGYPT.										
36	Alexandria	31 12	29 52	1 59	Colombo	257	+ 8 06	+ 8 12	−1.2	−0.2	0.29
37	Port Said	31 16	32 19	2 09	Colombo	257	+ 7 49	+ 8 04	−0.8	−0.2	0.52
	ASIA (MEDITERRANEAN SEA).										
	SYRIA.										
38	Yafa (Joppa or Jaffa)	32 03	34 44	2 19	Colombo	257	+ 7 48	+ 8 03	−0.6	−0.2	0.67
39	Beirut	33 54	35 28	2 22	Colombo	257	+ 7 53	+ 8 08	−0.7	−0.1	0.59
40	Tripoli	34 20	35 45	2 23	Colombo	257	+ 8 08	+ 8 23	0.0	0.0	0.96
	ASIA MINOR AND ISLANDS.										
41	Famagusta, Cyprus Island	35 07	33 57	2 16	Colombo	257	+ 7 48	+ 8 03	−0.5	−0.1	0.74
42	Smyrna Harbor	38 25	27 08	1 49	Colombo	257	+ 7 24	+ 7 49	+0.4	0.0	1.26

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	11 35	5 23	11 30*b*	5 28*a*	4.1	5.5	2.5	4.2	0.5	0.3	.....	0.4	2.8	2.0	17.5
2	11 50	5 38	11 46*b*	5 43*a*	5.5	7.3	3.4	5.6	0.5	0.3	.....	0.5	3.6	2.7	17.0
3	11 55	5 43	11 51*b*	5 48*a*	6.4	8.5	3.9	6.5	0.6	0.3	.....	0.6	4.2	3.2	16.5
4	11 50	5 40	11 45*a*	5 45*b*	3.9	5.2	2.4	4.0	0.4	0.3	.....	0.4	2.6	1.9	24.5
5	3 00	9 10	2 54*b*	9 17*b*	2.1	2.8	1.3	2.2	0.3	0.2	.....	0.3	1.4	1.0	23.5
6	5 20	11 30	5 11*b*	11 41*b*	1.5	2.0	0.9	1.6	0.2	0.2	.....	0.3	1.0	0.7	22.0
7	5 50	12 00	5 45*b*	12 06*b*	3.6	4.8	2.2	3.7	0.4	0.2	.....	0.4	2.4	1.8	19.0
8	7 30	1 20	7 24*b*	1 26*a*	3.3	4.4	2.0	3.4	0.4	0.2	.....	0.4	2.2	1.6	19.0
9	5 50	12 00	5 44*b*	12 06*b*	2.5	3.3	1.5	2.6	0.3	0.2	.....	0.3	1.6	1.2	19.0
10	0 20	6 30	0 16*a*	6 35*a*	6.5	8.6	4.0	6.6	0.6	0.3	.....	0.6	4.3	3.2	18.0
11	1 15	7 27	1 11*a*	7 31*a*	5.9	7.8	3.6	6.0	0.5	0.3	.....	0.5	3.9	2.9	17.5
12	0 40	6 50	0 36*a*	6 55*a*	7.0	9.3	4.3	7.1	0.6	0.4	.....	0.6	4.6	3.5	17.0
13	0 50	7 00	0 46*a*	7 05*a*	6.4	8.5	3.9	6.5	0.5	0.3	.....	0.6	4.2	3.2	16.5
14	0 35	6 47	0 30*a*	6 52*a*	5.0	6.6	3.0	5.1	0.5	0.3	.....	0.5	3.3	2.5	18.0
15	0 40	6 52	0 35*a*	6 57*a*	5.0	6.6	3.0	5.1	0.5	0.3	.....	0.5	3.3	2.5	17.5
16	11 30	5 18	11 24*b*	5 25*a*	2.9	3.9	1.8	3.0	0.4	0.2	.....	0.4	2.0	1.4	22.5
17	0 20	6 32	0 14*a*	6 38*a*	3.3	4.4	2.0	3.4	0.4	0.2	.....	0.4	2.2	1.6	22.5
18	0 15	6 27	0 09*a*	6 33*a*	4.3	5.7	2.6	4.4	0.4	0.3	.....	0.5	2.8	2.1	21.5
19	0 30	6 42	0 26*a*	6 47*a*	6.6	8.8	4.0	6.7	0.5	0.3	.....	0.6	4.4	3.3	15.5
20	1 05	7 17	1 02*a*	7 21*a*	8.2	10.9	5.0	8.3	0.5	0.4	.....	0.6	5.4	4.1	15.5
21	1 35	7 45	1 31*a*	7 49*a*	7.8	10.4	4.8	7.9	0.6	0.4	.....	0.6	5.2	3.9	15.0
22	1 30	7 40	1 25*a*	7 45*a*	6.0	8.0	3.7	6.1	0.4	0.3	.....	0.6	4.0	3.0	15.0
23	1 55	8 07	1 49*a*	8 13*a*	2.5	3.3	1.5	2.6	0.3	0.2	.....	0.3	1.6	1.2	14.5
24	2 00	8 12	2 11*a*	7 50*a*	1.8	2.3	1.2	2.2	0.6	0.3	.....	0.7	1.2	1.0	14.5
25	2 07	8 19	2 18*a*	7 59*a*	1.6	2.1	1.1	1.9	0.5	0.3	.....	0.6	1.0	0.9	14.5
26	2 10	8 22	2 20*a*	8 03*a*	1.7	2.2	1.1	2.0	0.5	0.3	.....	0.6	1.1	0.9	14.0
27	2 27	8 39	2 38*a*	8 17*a*	1.8	2.3	1.2	2.2	0.6	0.3	.....	0.7	1.2	1.0	13.0
28	2 46	8 58	2 56*a*	8 37*a*	2.0	2.6	1.3	2.4	0.6	0.4	.....	0.7	1.3	1.1	12.0
29	3 09	9 21	3 18*a*	9 04*a*	2.2	2.8	1.5	2.6	0.6	0.4	.....	0.7	1.4	1.2	10.5
30	3 33	9 55	3 36*a*	9 45*a*	2.1	3.0	0.8	2.2	0.3	0.1	.....	0.3	1.5	1.1	9.5
31	3 35	9 57	3 37*a*	9 50*a*	2.9	4.2	1.1	3.0	0.3	0.1	.....	0.3	2.1	1.5	9.0
32	3 50	10 02	3 52*a*	9 54*a*	3.7	5.4	1.4	3.9	0.4	0.1	.....	0.4	2.7	1.9	9.5
33	4 10	10 23	4 12*a*	10 16*a*	3.5	5.1	1.4	3.6	0.3	0.1	.....	0.3	2.6	1.8	9.0
34	3 00	9 12	3 03*a*	9 03*b*	1.5	2.2	0.6	1.6	0.2	0.1	.....	0.2	1.1	0.8	9.0
35	9 55	3 45	10 00*a*	3 27*a*	0.8	1.2	0.3	0.9	0.2	0.1	.....	0.2	0.6	0.4	6.0
36	9 57	3 38	10 05*a*	3 20*b*	0.4	0.5	0.3	0.9	0.2	0.0	.....	0.2	0.3	0.4	3.5
37	9 40	3 30	9 46*a*	3 09*b*	0.7	1.0	0.3	0.8	0.2	0.0	.....	0.2	0.5	0.4	2.5
38	9 40	3 30	9 45*a*	3 14*a*	0.9	1.3	0.4	1.0	0.2	0.0	.....	0.2	0.6	0.5	2.0
39	9 45	3 35	9 50*a*	3 17*a*	0.8	1.2	0.3	0.9	0.2	0.0	.....	0.2	0.6	0.4	1.5
40	10 00	3 50	10 03*a*	3 39*a*	1.3	1.9	0.5	1.4	0.2	0.1	.....	0.2	1.0	0.7	1.5
41	9 40	3 30	9 44*a*	3 15*a*	1.0	1.4	0.4	1.1	0.2	0.0	.....	0.2	0.7	0.5	1.5
42	9 15	3 15	9 18*a*	3 06*a*	1.7	2.5	0.7	1.8	0.2	0.1	.....	0.2	1.2	0.9	4.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	EUROPE (MEDITERRANEAN SEA).										
	GREECE.	North.	East.				Athens time, 23° 43′ East.		Mean Low Water Springs.		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Volo, Gulf of Volo	39 22	22 58	1 32	Colombo	257	+7 28	+7 40	+0.3	+0.1	1.19
2	Patras, Gulf of Corinth	38 15	21 44	1 27	Colombo	257	+1 58	+2 11	−0.8	−0.2	0.52
	AUSTRIA.										
	Adriatic Sea.						Time meridian, 15° East.				
3	Ragusa	42 42	18 15	1 13	Colombo	257	+2 10	+2 25	−0.8	−0.2	0.50
4	Port Comisa, Lissa Island	43 03	16 05	1 04	Colombo	257	+2 07	+2 37	+0.4	0.0	1.26
5	Port Sebenico	43 43	15 51	1 03	Colombo	257	+4 18	+4 53	−0.8	−0.2	0.52
6	Port Lussin Piccolo	44 33	14 26	0 58	Colombo	257	+6 23	+7 08	−0.7	−0.1	0.59
7	Port Fiume	45 19	14 27	0 58	Colombo	257	+6 28	+7 13	−0.7	−0.1	0.59
8	Port Pola	44 53	13 48	0 55	Colombo	257	+7 16	+8 06	+1.2	+0.2	1.70
9	Trieste	45 38	13 45	0 55	Colombo	257	+7 44	+8 31	0.0	0.0	1.04
	ITALY AND ISLANDS.										
10	Port Malamocco	45 20	12 19	0 49	Colombo	257	+8 37	+9 32	+1.0	+0.2	1.70
11	Brindisi	40 39	18 00	1 12	Colombo	257	+1 29	+1 42	−0.2	0.0	0.89
12	Port Augusta, Sicily	37 13	15 14	1 01	Colombo	257	+1 10	+1 23	−1.0	−0.2	0.44
13	Valetta Harbor, Malta	35 54	14 31	0 58	Colombo	257	+1 25	+1 38	−1.0	−0.2	0.34
14	Naples	40 50	14 16	0 57	Colombo	257	+7 29	+7 39	−0.8	−0.2	0.57
	FRANCE.										
	Mediterranean Sea.						Paris time, 2° 20′ East.				
15	Toulon	43 05	5 55	0 24	Colombo	257	+6 19	+6 46	−1.2	−0.2	0.33
16	Marseille	43 18	5 21	0 21	Colombo	257	+5 51	+6 25	−1.2	−0.2	0.36
	SPAIN.										
	Mediterranean Sea.		West.				Greenwich time.				
17	Valencia	39 27	0 19	0 01	Colombo	257	+3 15	+3 45	−0.3	−0.1	0.89
18	Malaga	36 43	4 24	0 18	Colombo	257	+0 47	+1 07	+0.8	0.0	1.63
19	Gibraltar, Gibraltar Strait	36 07	5 21	0 21	Cape Town	273	+0 25	+0 34	−0.8	−0.2	0.82
20	Tarifa, Gibraltar Strait	36 00	5 36	0 22	Cape Town	273	+0 23	+0 32	+0.8	+0.2	1.24
	EUROPE (WEST COAST).										
	SPAIN—continued.										
21	Conil	36 17	6 15	0 25	Lisbon	277	−0 34	−0 08	0.0	0.0	1.00
22	Cadiz	36 31	6 19	0 25	Lisbon	277	−0 39	−0 08	+0.7	+0.1	1.07
23	Salmedina Rocks	36 42	6 26	0 26	Lisbon	277	−0 38	−0 07	−1.8	−0.2	0.83
24	Bonanza, Guadalquivir River	36 48	6 20	0 25	Lisbon	277	+0 21	+0 52	−1.8	−0.2	0.83
25	Port of Huelva, Odiel River	37 08	6 50	0 27	Lisbon	277	+0 08	+0 34	−1.8	−0.2	0.83
	PORTUGAL.						Lisbon time, 9° 11′ West.				
26	Guadiana River Entrance	37 10	7 19	0 29	Lisbon	277	−0 27	+0 04	0.0	0.0	1.00
27	Lagos	37 07	8 38	0 35	Lisbon	277	−0 11	+0 20	+0.8	+0.2	1.08
28	Setubal	38 31	8 45	0 35	Lisbon	277	+0 09	+0 40	−0.4	0.0	0.97
29	Tagus River Entrance	38 40	9 15	0 37	Lisbon	277	−0 24	+0 07	−1.4	−0.2	0.88
30	LISBON (Arsenal), Tagus River	38 42	9 08	0 37	Lisbon	277	0 00	0 00	0.0	0.0	1.00
31	Peniche	39 20	9 23	0 38	Lisbon	277	−0 23	+0 08	−0.7	−0.1	0.98
32	Port Figueria, Mondego River	40 09	8 52	0 35	Lisbon	277	−0 21	+0 12	+0.4	0.0	1.04
33	Oporto, Douro River	41 09	8 41	0 35	Lisbon	277	+0 09	+0 40	−1.8	−0.2	0.83
	SPAIN—continued.										
	North and west coasts.						Greenwich time.				
34	Vigo	42 15	8 41	0 35	Lisbon	277	+1 31	+2 02	+0.8	+0.2	1.08
35	Salvora Island, Arosa Bay	42 28	9 01	0 36	Lisbon	277	+1 17	+1 48	−0.8	−0.2	0.92
36	Cape Finisterre	42 53	9 16	0 37	Lisbon	277	+1 18	+1 49	−1.0	−0.2	0.91
37	Port Camariñas	43 08	9 09	0 37	Rochelle	281	−0 16	−0 06	−1.7	0.0	0.86
38	Coruña	43 23	8 24	0 34	Rochelle	281	−0 19	−0 09	−1.5	+0.1	0.87
39	Ferrol	43 29	8 16	0 33	Rochelle	281	−0 19	−0 09	−1.5	0.0	0.88
40	Cedeira	43 39	8 05	0 32	Rochelle	281	−0 21	−0 11	−1.5	+0.1	0.87
41	Vivero	43 41	7 32	0 30	Rochelle	281	−0 22	−0 12	−1.6	+0.1	0.86
42	Rivadeo	43 33	7 00	0 28	Rochelle	281	−0 23	−0 13	−1.9	0.0	0.85
43	Aviles River	43 38	5 56	0 24	Rochelle	281	−0 27	−0 17	−3.9	−0.8	0.71
44	Gijon Bay	43 34	5 39	0 23	Rochelle	281	−0 23	−0 13	−2.4	−0.2	0.82
45	San Vicente de la Barquera	43 24	4 25	0 18	Rochelle	281	−0 19	−0 06	−5.2	−0.7	0.64
46	Suances, San Martin de la Arena	43 27	4 01	0 16	Rochelle	281	−0 21	−0 10	−4.0	−0.5	0.72
47	Santander	43 28	3 47	0 15	Rochelle	281	−0 17	−0 07	−1.3	−0.1	0.90
48	Santoña	43 28	3 28	0 14	Rochelle	281	−0 28	−0 19	−3.4	−0.3	0.75

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	9 15	3 02	9 18*a*	2 53*a*	1.6	2.3	0.6	1.7	0.2	0.1	.....	0.2	1.2	0.8	5.0
2	3 40	9 53	3 46*a*	9 32*b*	0.7	1.0	0.3	0.8	0.2	0.0	.....	0.2	0.5	0.4	5.5
3	4 12	10 27	4 28*a*	9 47*b*	0.7	1.0	0.2	1.0	0.4	0.2	.....	0.5	0.5	0.4	7.0
4	4 00	10 30	4 03*a*	10 21*b*	1.7	2.4	0.7	1.8	0.2	0.1	.....	0.2	1.2	0.9	7.5
5	6 10	0 20	6 16*a*	− 0 01*a*	0.7	1.0	0.3	0.8	0.2	0.0	.....	0.2	0.5	0.4	8.0
6	8 10	2 25	8 15*a*	2 07*a*	0.8	1.1	0.3	0.9	0.2	0.0	.....	0.2	0.6	0.4	8.5
7	8 15	2 35	8 20*a*	2 17*a*	0.8	1.2	0.3	0.9	0.2	0.0	.....	0.2	0.6	0.4	8.5
8	9 00	3 25	9 03*a*	3 16*a*	2.3	3.4	0.9	2.4	0.3	0.1	.....	0.3	1.7	1.2	8.5
9	9 28	3 50	9 23*a*	3 40*a*	1.4	2.0	0.6	1.5	0.2	0.1	.....	0.2	1.0	0.7	8.5
10	10 15	4 45	10 18*a*	4 36*a*	2.3	3.3	0.9	2.4	0.3	0.1	.....	0.3	1.6	1.2	9.5
11	3 30	9 43	3 34*a*	9 31*b*	1.2	1.8	0.5	1.3	0.2	0.0	.....	0.2	0.9	0.6	7.0
12	3 00	9 13	3 04*a*	9 01*b*	0.6	0.9	0.2	0.6	0.1	0.0	.....	0.1	0.4	0.3	7.5
13	3 12	9 25	3 18*a*	9 06*b*	0.5	0.7	0.2	0.5	0.1	0.0	4 18	0.1	0.4	0.2	7.5
14	9 15	3 00	9 21*a*	2 41*a*	0.8	1.0	0.5	0.8	0.1	0.0	.....	0.1	0.5	0.4	8.0
15	8 22	2 24	8 43*a*	1 45*a*	0.4	0.6	0.2	0 6	0.3	0.2	10 28	0.3	0.3	0.3	11.5
16	7 31	2 00	7 51*a*	1 22*a*	0.5	0.6	0.3	0.7	0.3	0.2	9 49	0.3	0.3	0.3	12.0
17	5 00	11 30	5 13*a*	11 08*a*	1.2	1.5	0.8	1.5	0.4	0.2	.....	0.5	0.8	0.7	13.5
18	2 15	8 35	2 24*a*	8 18*a*	2.2	2.9	1.5	2.7	0.6	0.4	.....	0.7	1.4	1.2	14.5
19	1 35	7 55	1 29*a*	8 02*a*	2.8	3.7	1.7	2.9	0.4	0.2	.....	0.4	1.8	1.4	14.5
20	1 32	7 52	1 26*a*	7 59*a*	4.2	5.6	2.6	4.3	0.4	0.3	.....	0.6	2.8	2.1	15.0
21	1 05	7 18	1 01*a*	7 22*a*	3.9	12.0	5.2	8.9	0.7	0.4	.....	0.9	6.0	4.4	15.0
22	1 06	7 13	0 56*a*	7 17*a*	9.5	12.8	5.6	9.5	0.7	0.4	.....	0.9	6.4	4.7	15.0
23	1 00	7 13	0 56*a*	7 17*a*	7.4	10.0	4.3	7.4	0.6	0.4	.....	0.8	5.0	3.7	15.0
24	2 00	8 13	1 56*a*	8 17*a*	7.4	10.0	4.3	7.4	0.6	0.4	.....	0.8	5.0	3.7	15.0
25	1 40	7 53	1 36*a*	7 57*a*	7.4	10.0	4.3	7.4	0.6	0.4	.....	0.8	5.0	3.7	15.5
26	1 45	7 58	1 41*a*	8 02*a*	8.9	12.0	5.2	8.9	0.7	0.4	.....	0.9	6.0	4.4	15.5
27	1 55	8 08	1 51*a*	8 13*a*	9.6	13.0	5.6	9.6	0.7	0.4	.....	0.9	6.5	4.8	16.0
28	2 15	8 28	2 11*a*	8 33*a*	8.6	11.6	5.0	8.6	0.7	0.4	.....	0.9	5.8	4.3	16.0
29	1 40	7 53	1 36*a*	7 58*a*	7.8	10.5	4.6	7.8	0.7	0.4	.....	0.8	5.2	3.9	16.5
30	2 04	7 46	2 00*a*	7 51*a*	8.9	12.0	5.2	8.9	0.7	0.4	24 12	0.9	6.0	4.4	16.5
31	1 40	7 53	1 36*a*	7 58*a*	8.3	11.2	4.9	8.3	0.7	0.4	.....	0.9	5.6	4.1	16.5
32	1 45	8 00	1 41*a*	8 06*a*	9.3	12.5	5.4	9.3	0.7	0.4	.....	0.9	6.2	4.6	16.5
33	2 15	8 28	2 11*a*	8 34*a*	7.4	10.0	4.3	7.4	0.6	0.4	.....	0.8	5.0	3.7	16.5
34	3 00	9 13	2 56*a*	9 17*a*	9.6	13.0	5.6	9.6	0.7	0.4	.....	0.9	6.5	4.8	17.0
35	2 45	8 58	2 41*a*	9 03*a*	8.2	11.0	4.8	8.2	0.7	0.4	.....	0.9	5.5	4.1	17.0
36	2 45	8 58	2 41*a*	9 03*a*	8.1	10.9	4.7	8.1	0.7	0.4	.....	0.9	5.4	4.0	17.5
37	2 43	8 56	2 42*a*	8 59*a*	10.7	14.6	6.0	10.9	0.4	0.2	.....	0.4	7.3	5.5	17.5
38	2 43	8 56	2 42*a*	8 59*a*	10.8	14.8	6.1	11.0	0.4	0.2	.....	0.4	7.4	5.5	17.0
39	2 44	8 57	2 43*a*	9 00*a*	10.9	14.9	6.1	11.1	0.4	0.2	.....	0.4	7.4	5.6	17.0
40	2 43	8 56	2 42*a*	8 59*a*	10.8	14.8	6.1	11.0	0.4	0.2	.....	0.4	7.4	5.5	17.0
41	2 44	8 57	2 43*a*	9 00*a*	10.7	14.7	6.0	10.9	0.4	0.2	.....	0.4	7.4	5.5	17.0
42	2 45	8 58	2 44*a*	9 01*a*	10.5	14.4	5.9	10.7	0.4	0.2	.....	0.4	7.2	5.4	16.5
43	2 45	8 58	2 44*a*	9 02*a*	8.8	12.0	4.9	9.0	0.4	0.2	.....	0.4	6.0	4.5	16.0
44	2 50	9 03	2 47*a*	9 08*a*	10.2	13.5	6.3	10.7	0.8	0.5	.....	0.9	6.8	5.3	16.0
45	3 00	9 14	2 56*a*	9 19*a*	7.9	10.4	4.9	8.3	0.7	0.5	.....	0.8	5.2	4.1	15.5
46	3 00	9 14	2 56*a*	9 19*a*	8.9	11.7	5.5	9.3	0.7	0.5	.....	0.9	5.8	4.6	15.5
47	3 05	9 18	3 02*a*	9 23*a*	11.2	14.8	6.9	11.7	0.8	0.5	.....	1.0	7.4	5.8	15.5
48	2 55	9 07	2 52*a*	9 12*a*	9.3	12.3	5.7	9.7	0.7	0.5	.....	0.9	6.2	4.8	15.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	EUROPE (WEST COAST)—Cont'd.										
	SPAIN—continued.										
	North and west coasts—Continued.	*North.*	*West.*				*Greenwich time.*		*Mean Low Water Springs.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Castro Urdiales	43 24	3 16	0 13	Rochelle	281	−0 34	−0 24	−3.9	−0.4	0.72
2	Bilbao River Entrance	43 23	3 04	0 12	Rochelle	281	−0 55	−0 54	−3.2	−0.2	0.78
3	Bilbao	43 16	2 56	0 12	Rochelle	281	−0 45	−0 50	−6.5	−0.8	0.54
4	Lequeitio	43 23	2 34	0 10	Rochelle	281	−0 32	−0 25	−5.1	−0.7	0.65
5	San Sebastian	43 19	2 00	0 08	Rochelle	281	−0 34	−0 27	−4.0	−0.5	0.73
	FRANCE—continued.										
	Bay of Biscay.						*Paris time, 2° 20′ East.*				
6	St. Jean de Luz (Fort Socoa)	43 24	1 40	0 07	Rochelle	281	−0 14	−0 10	−3.4	−0.3	0.75
7	Boucaut, Adour River	43 34	1 31	0 06	Rochelle	281	+0 13	+0 22	−6.9	−0.8	0.51
8	Cape Feret	44 38	1 14	0 05	Rochelle	281	+0 27	+0 42	−3.2	−0.4	0.77
9	Arcachon Basin	44 40	1 09	0 05	Rochelle	281	+1 02	+1 18	−3.1	−0.3	0.77
10	Cordouan Light, Gironde River	45 35	1 10	0 05	Rochelle	281	+0 12	+0 27	+0.5	+0.2	1.02
11	Royan, Gironde River	45 37	1 02	0 04	Rochelle	281	+0 14	+0 38	+0.4	+0.2	1.02
12	Montagne, Gironde River	45 28	0 48	0 03	Rochelle	281	+0 49	+1 29	+0.3	+0.1	1.02
13	Maréchale, Gironde River	45 19	0 46	0 03	Rochelle	281	+1 10	+2 00	+0.4	+0.2	1.02
14	Pauillac, Gironde River	45 12	0 45	0 03	Rochelle	281	+1 26	+2 27	+1.6	+0.3	1.10
15	Blaye, Gironde River	45 07	0 40	0 03	Rochelle	281	+1 52	+3 07	+0.3	+0.1	1.02
16	Bordeaux, Gironde River	44 50	0 34	0 02	Rochelle	281	+3 04	+3 08	−0.9	−0.1	0.94
17	Marennes, Seudre River Entrance	45 48	1 09	0 05	Rochelle	281	+0 02	+0 16	−2.7	−0.3	0.81
18	Ile d'Aix, Charente River	46 01	1 11	0 05	Rochelle	281	+0 04	−0 04	+0.3	+0.1	1.02
19	Rochefort, Charente River	45 57	0 58	0 04	Rochelle	281	+0 21	+0 28	+0.4	+0.2	1.02
20	ROCHELLE	46 09	1 09	0 05	Rochelle	281	0 00	0 00	0.0	0.0	1.00
21	St. Martin, Ile de Ré	46 12	1 22	0 05	Rochelle	281	−0 23	−0 03	+0.5	+0.2	1.02
22	Les Sables d'Olonne	46 29	1 48	0 07	Rochelle	281	−0 01	+0 20	−3.1	−0.3	0.77
23	St. Gilles	46 42	1 57	0 08	Rochelle	281	0 00	+0 19	−1.6	−0.1	0.88
24	Isle d'Yeu	46 43	2 23	0 10	Rochelle	251	0 00	+0 19	−1.3	0.0	0.90
25	Fromantine Channel	46 53	2 09	0 09	Rochelle	281	−0 19	−0 01	−3.2	−0.3	0.77
26	Port l'Herbandiere, Noirmoutier I.	47 02	2 18	0 09	Rochelle	281	−0 14	+0 04	+0.4	+0.2	1.02
27	Port Pornic	47 07	2 07	0 08	Rochelle	281	−0 20	−0 02	+0.2	+0.1	1.01
28	St. Nazaire, Loire River	47 16	2 12	0 09	Rochelle	281	+0 16	+0 34	+0.3	+0.1	1.02
29	Paimbœuf, Loire River	47 17	2 03	0 08	Rochelle	281	+0 58	+1 16	+0.7	+0.2	1.04
30	Pellerin, Loire River	47 13	1 45	0 07	Rochelle	281	+1 39	+2 04	+0.1	+0.2	0.99
31	Nantes, Loire River	47 12	1 33	0 06	Rochelle	281	+2 28	+3 03	+0.2	+0.1	1.01
32	Pouliguen	47 16	2 25	0 10	Rochelle	281	−0 03	+0 17	+0.3	+0.1	1.02
33	Croisic	47 18	2 31	0 10	Rochelle	281	+0 07	+0 26	+0.4	+0.2	1.02
34	Penerf, Vilaine River	47 31	2 30	0 10	Rochelle	281	+0 12	+0 32	+0.5	+0.2	1.02
35	Port Navalo, Quiberon Bay	47 33	2 55	0 12	Rochelle	281	+0 29	+0 49	+0.3	+0.1	1.02
36	Vannes	47 40	2 45	0 11	Rochelle	281	+2 30	+2 51	−0.4	0.0	0.97
37	Auray	47 41	2 58	0 12	Rochelle	281	+0 44	+1 04	0.0	+0.1	0.99
38	Crac'h River	47 34	3 00	0 12	Rochelle	281	+0 14	+0 34	+0.4	+0.2	1.02
39	Port Haliguen, Quiberon Bay	47 29	3 06	0 12	Rochelle	281	+0 19	+0 39	+0.5	+0.1	1.03
40	Hoedic Island	47 20	2 52	0 11	Rochelle	281	+0 03	+0 26	+0.4	+0.2	1.02
41	Port le Palais, Belle Isle	47 21	3 09	0 13	Rochelle	281	+0 10	+0 32	+0.3	+0.1	1.02
42	Port Louis	47 42	3 21	0 18	Brest	285	−0 23	−0 18	−5.0	−0.8	0.71
43	Lorient	47 45	3 22	0 13	Brest	285	−0 19	−0 14	−5.0	−0.8	0.71
44	Concarneau	47 53	3 54	0 16	Brest	285	−0 25	−0 20	−5.9	−0.9	0.66
45	Glenan Islands	47 46	4 02	0 16	Brest	285	−0 25	−0 20	−5.8	−0.8	0.67
46	Benodet, Odet River	47 52	4 07	0 16	Brest	285	−0 10	−0 04	−3.8	−0.6	0.79
47	Loctudy	47 50	4 10	0 17	Brest	285	−0 04	0 00	−3.8	−0.6	0.78
48	Penmarch	47 48	4 23	0 18	Brest	285	−0 18	−0 11	−5.6	−0.8	0.68
49	Audièrne	48 01	4 33	0 18	Brest	285	−0 19	−0 14	−7.4	−1.0	0.57
	English Channel.										
50	Isle de Sein	48 03	4 52	0 19	Brest	285	+0 03	+0 09	−2.0	−0.4	0.88
51	Douarnenez	48 06	4 19	0 17	Brest	285	−0 04	+0 02	−1.0	−0.2	0.94
52	Camaret	48 17	4 36	0 18	Brest	285	+0 12	+0 17	−1.2	−0.2	0.93
53	BREST	48 23	4 30	0 18	Brest	285	0 00	0 00	0.0	0.0	1.00
54	Port Conquet	48 22	4 47	0 19	Brest	285	+0 08	+0 11	−0.2	−0.2	0.99
55	Molène	48 19	4 55	0 20	Brest	285	+0 24	+0 27	−0.3	−0.1	0.99
56	Ushant or Ouessant Island	48 28	5 08	0 21	Brest	285	+0 15	+0 18	−0.6	−0.2	0.97
57	Abervrach	48 37	4 35	0 18	Brest	285	+0 37	+0 40	+1.0	0.0	1.06
58	Isle de Bas	48 45	4 02	0 16	Brest	285	+1 10	+1 13	+2.2	+0.2	1.13
59	Roscoff	48 43	3 59	0 16	Brest	285	+1 15	+1 18	+2.1	+0.3	1.12
60	Morlaix	48 40	3 53	0 16	Brest	285	+1 35	+1 38	+3.2	+0.4	1.18
61	Ploumanach	48 50	3 29	0 14	Brest	285	+1 43	+1 46	+3.2	+0.4	1.20
62	Plougrescant, Tréguier River	48 51	3 11	0 13	Brest	285	+1 47	+1 50	+4.6	+0.6	1.27
63	Tréguier, Tréguier River	48 46	3 14	0 13	Brest	285	+1 57	+2 00	+2.8	+0.4	1.16
64	Heaux Light	48 55	3 05	0 12	Brest	285	+2 07	+2 09	+9.4	+1.4	1.54

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	2 50	9 03	2 46a	9 08a	8.9	11.8	5.5	9.3	0.7	0.5	.....	0.9	5.9	4.6	15.0
2	3 10	9 32	3 07a	9 38a	9.4	12.7	5.9	10.0	0.7	0.5	.....	0.9	6.4	5.0	15.0
3	3 20	9 42	3 16a	9 45a	6.7	8.9	4.1	7.1	0.6	0.4	.....	0.7	4.4	3.5	15.0
4	2 55	9 05	2 52a	9 10a	8.0	10.5	4.9	8.4	0.7	0.5	.....	0.8	5.2	4.2	15.0
5	2 55	9 05	2 51a	9 10a	8.9	11.7	5.5	9.3	0.7	0.5	.....	0.9	5.8	4.6	14.5
6	3 07	9 14	3 04a	9 18a	9.3	12.3	5.8	9.8	0.7	0.5	0 47	0.9	6.2	4.8	14.5
7	3 35	9 47	3 31a	9 52a	6.3	8.3	3.9	6.6	0.6	0.4	.....	0.7	4.2	3.3	14.5
8	3 50	10 08	3 46a	10 13a	9.6	12.6	5.9	10.0	0.7	0.5	.....	0.9	6.3	5.0	14.5
9	4 25	10 44	4 21a	10 49a	9.6	12.7	5.9	10.0	0.7	0.5	.....	0.9	6.4	5.0	14.5
10	3 35	9 53	3 32a	9 57a	12.7	16.8	7.8	12.8	0.7	0.5	.....	0.9	8.4	6.3	14.5
11	3 38	10 05	3 35a	10 09a	12.6	16.7	7.7	12.7	0.7	0.5	.....	0.9	8.4	6.3	14.5
12	4 14	10 57	4 11a	11 01a	12.6	16.6	7.7	12.7	0.7	0.5	.....	0.9	8.3	6.3	14.5
13	4 35	11 28	4 32a	11 32a	12.6	16.7	7.7	12.7	0.7	0.5	.....	0.9	8.4	6.3	14.5
14	4 51	11 56	4 49a	11 59a	13.7	18.1	8.4	13.8	0.8	0.5	.....	0.9	9.0	6.8	14.5
15	5 17	0 10	5 14a	0 14a	12.6	16.6	7.7	12.7	0.7	0.5	.....	0.9	8.3	6.3	14.5
16	6 30	0 12	6 27a	0 16a	11.6	15.3	7.1	11.7	0.7	0.5	.....	0.9	7.6	5.8	14.5
17	3 25	9 42	3 22a	9 46a	10.0	13.2	6.2	10.1	0.6	0.4	.....	0.8	6.6	5.0	14.5
18	3 27	9 22	3 25a	9 26a	12.6	16.6	7.7	12.7	0.7	0.5	0 57	0.9	8.3	6.3	14.5
19	3 45	9 55	3 42a	9 59a	12.6	16.7	7.7	12.7	0.7	0.5	.....	0.9	8.4	6.3	14.5
20	3 23	9 26	3 20a	9 30a	12.4	16.2	7.7	12.5	0.7	0.5	1 15	0.9	8.1	6.2	14.5
21	3 00	9 23	2 57a	9 27a	12.7	16.8	7.8	12.8	0.7	0.5	.....	0.9	8.4	6.3	15.0
22	3 20	9 44	3 17a	9 48a	9.6	12.7	5.9	9.7	0.6	0.4	.....	0.8	6.4	4.8	15.0
23	3 20	9 42	3 17a	9 46a	10.9	14.4	6.7	11.0	0.7	0.4	.....	0.8	7.2	5.4	15.0
24	3 18	9 40	3 15a	9 44a	11.1	14.7	6.8	11.2	0.7	0.4	.....	0.8	7.4	5.5	15.5
25	3 00	9 21	2 57a	9 25a	9.5	12.6	5.8	9.6	0.6	0.4	.....	0.8	6.3	4.7	15.5
26	3 05	9 26	3 02a	9 30a	12.6	16.7	7.7	12.7	0.7	0.5	.....	0.9	8.4	6.3	15.5
27	3 00	9 21	2 57a	9 25a	12.5	16.5	7.7	12.6	0.7	0.5	.....	0.9	8.2	6.2	15.5
28	3 35	9 56	3 32a	10 00a	12.6	16.6	7.7	12.7	0.7	0.5	.....	0.9	8.3	6.3	15.5
29	4 18	10 39	4 15a	10 43a	12.9	17.0	7.9	18.0	0.7	0.5	.....	0.9	8.5	6.4	15.5
30	5 00	11 28	4 57a	11 32a	12.3	16.3	7.6	12.4	0.7	0.5	.....	0.9	8.2	6.1	15.0
31	5 50	12 28	5 47a	12 32a	12.5	16.5	7.7	12.6	0.7	0.5	.....	0.9	8.2	6.2	15.0
32	3 15	9 38	3 12a	9 42a	12.6	16.6	7.7	12.7	0.7	0.5	.....	0.9	8.3	6.3	15.5
33	3 25	9 47	3 22a	9 51a	12.6	16.7	7.7	12.7	0.7	0.5	.....	0.9	8.4	6.3	15.5
34	3 30	9 53	3 27a	9 57a	12.7	16.8	7.8	12.8	0.7	0.5	.....	0.9	8.4	6.3	15.5
35	3 45	10 08	3 42a	10 12a	12.6	16.6	7.7	12.7	0.7	0.5	.....	0.9	8.3	6.3	16.0
36	5 47	12 11	5 44a	12 15a	12.0	15.8	7.4	12.1	0.7	0.5	.....	0.9	7.9	6.0	15.5
37	4 00	10 23	3 57a	10 27a	12.3	16.2	7.6	12.4	0.7	0.5	.....	0.9	8.1	6.1	16.0
38	3 30	9 53	3 27a	9 57a	12.6	16.7	7.7	12.7	0.7	0.5	.....	0.9	8.4	6.3	16.0
39	3 35	9 58	3 32a	10 02a	12.8	16.9	7.9	12.9	0.7	0.5	.....	0.9	8.4	6.4	16.0
40	3 20	9 46	3 17a	9 50a	12.6	16.7	7.7	12.7	0.7	0.5	.....	0.9	8.4	6.3	15.5
41	3 25	9 50	3 22a	9 54a	12.6	16.6	7.7	12.7	0.7	0.5	.....	0.9	8.3	6.3	16.0
42	3 05	9 32	3 03a	9 36a	10.4	13.8	6.3	10.6	0.6	0.5	.....	0.7	6.9	5.0	16.0
43	3 09	9 36	3 07a	9 40a	10.4	13.8	6.3	10.6	0.6	0.5	.....	0.7	6.9	5.0	16.0
44	3 00	9 27	2 58a	9 31a	9.7	12.9	5.9	9.9	0.6	0.4	.....	0.7	6.4	4.7	16.5
45	3 00	9 27	2 58a	9 31a	9.8	13.0	6.0	10.0	0.6	0.5	.....	0.7	6.5	4.8	16.5
46	3 15	9 43	2 13a	9 47a	11.6	15.3	7.1	11.8	0.7	0.5	.....	0.8	7.6	5.6	16.5
47	3 20	9 46	2 18a	9 50a	11.5	15.2	7.0	11.7	0.7	0.5	.....	0.8	7.6	5.6	16.5
48	3 05	9 34	2 03a	9 38a	10.0	13.3	6.1	10.2	0.6	0.5	.....	0.7	6.6	4.8	16.5
49	3 04	9 31	3 02a	9 35a	8.4	11.1	5.1	8.6	0.6	0.4	.....	0.7	5.6	4.1	16.5
50	3 25	9 53	3 23a	9 56a	13.0	17.2	7.9	12.8	0.7	0.5	.....	0.8	8.6	6.4	17.0
51	3 20	9 48	3 18a	9 51a	13.8	18.3	8.4	13.6	0.7	0.5	.....	0.9	9.2	6.8	16.5
52	3 35	10 02	3 33a	10 05a	13.7	18.2	8.3	13.5	0.7	0.5	.....	0.9	9.1	6.8	17.0
53	3 23	9 45	3 21a	9 48a	14.7	19.5	9.0	14.5	0.8	0.4	1 06	0.9	9.8	7.2	17.0
54	3 30	9 55	3 28a	9 58a	14.6	19.3	8.9	14.4	0.8	0.6	.....	0.9	9.6	7.1	17.0
55	3 45	10 10	3 43a	10 13a	14.5	19.2	8.8	14.3	0.8	0.6	.....	0.9	9.6	7.1	17.0
56	3 35	10 00	3 33a	10 03a	14.3	18.9	8.7	14.1	0.8	0.6	.....	0.9	9.4	7.0	17.0
57	4 00	10 25	3 58a	10 28a	15.6	20.6	9.5	15.4	0.8	0.6	.....	0.9	10.3	7.6	17.0
58	4 35	11 00	4 33a	11 03a	16.6	22.0	10.1	16.4	0.8	0.6	.....	0.9	11.0	8.1	16.5
59	4 40	11 05	4 38a	11 08a	16.5	21.9	10.0	16.3	0.8	0.6	.....	0.9	11.0	8.1	16.5
60	5 00	11 25	4 58a	11 28a	17.4	23.1	10.6	17.2	0.8	0.6	.....	1.0	11.6	8.6	16.5
61	5 10	11 35	5 08a	11 38a	17.6	23.3	10.7	17.4	0.8	0.6	.....	1.0	11.6	8.6	16.5
62	5 15	11 40	5 13a	11 43a	18.7	24.8	11.4	18.5	0.9	0.6	.....	1.0	12.4	9.2	16.0
63	5 25	11 50	5 23a	11 53a	17.1	22.7	10.4	16.9	0.8	0.6	.....	0.9	11.4	8.4	16.0
64	5 35	12 00	5 33a	12 02a	22.7	30.4	13.3	22.2	0.8	0.9	.....	1.1	15.2	11.1	16.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	EUROPE (West Coast)—Cont'd.										
	FRANCE—continued.										
	English Channel—Continued.	*North.*	*West.*				*Paris time, 2° 20′ East.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Brehat	48 51	3 00	0 12	Brest	285	+2 04	+2 07	+ 9.4	+1.4	1.55
2	Lézardrieux	48 48	3 01	0 12	Brest	285	+2 06	+2 09	+11.0	+1.6	1.63
3	Paimpol	48 47	3 02	0 12	Brest	285	+2 09	+2 12	+10.4	+1.6	1.60
4	Portrieux	48 39	2 49	0 11	Brest	285	+2 10	+2 15	+10.1	+1.5	1.59
5	Binic Harbor	48 36	2 49	0 11	Brest	285	+2 12	+2 20	+ 9.0	+1.4	1.52
6	Légué or Port de St. Brieuc	48 32	2 43	0 11	Brest	285	+2 10	+2 24	+10.8	+1.6	1.62
7	Dahouet	48 30	2 36	0 10	Brest	285	+2 06	+2 22	+10.4	+1.6	1.60
8	Erquy	48 38	2 26	0 10	Brest	285	+2 08	+2 27	+11.6	+1.8	1.67
9	St. Malo	48 39	2 02	0 08	Brest	285	+2 10	+2 34	+14.2	+2.2	1.83
10	Cancale	48 40	1 51	0 07	Brest	285	+2 08	+2 34	+14.5	+2.7	1.87
11	Granville	48 50	1 36	0 06	Brest	285	+2 15	+2 37	+15.0	+2.2	1.86
12	Regneville	49 00	1 35	0 06	Brest	285	+2 22	+2 39	+13.2	+2.0	1.76
13	St. Germain	49 14	1 35	0 06	Brest	285	+2 27	+2 41	+12.2	+1.8	1.71
14	Carteret	49 22	1 47	0 07	Brest	285	+2 35	+2 44	+ 9.8	+1.4	1.56
15	Dielette	49 33	1 52	0 07	Brest	285	+2 47	+2 59	+ 6.2	+1.0	1.36
16	Chausey Islands	48 52	1 49	0 07	Brest	285	+2 21	+2 33	+13.2	+2 0	1.76
17	Les Minquiers	48 59	2 04	0 08	Brest	285	+2 13	+2 06	+13.2	+2.0	1.76
18	St. Hèlier, Jersey Island	49 10	2 07	0 08	Brest	285	+2 36	+2 30	+10.1	+1.5	1.59
19	St. Peter Port, Guernsey Island	49 27	2 32	0 10	Brest	285	+2 41	+2 39	+ 5.6	+0.8	1.32
20	Casquets Islands	49 43	2 23	0 10	Brest	285	+2 49	+2 47	− 8.6	+0.6	0.79
21	Alderney, Alderney Island	49 43	2 12	0 09	Brest	285	+2 49	+2 47	− 2.2	−0.2	0.87
22	Omonville	49 43	1 51	0 07	Havre	289	−1 55	−3 07	− 6.6	−0.6	0.66
23	Cherbourg	49 39	1 37	0 06	Havre	289	−1 27	−2 24	− 4.4	−0.4	0.76
24	Barfleur	49 40	1 16	0 05	Havre	289	−0 44	−1 32	− 5.0	−0.4	0.73
25	La Hougue	49 34	1 16	0 05	Havre	289	−0 45	−1 24	− 3.8	−0.2	0.80
26	Port-en-Bessin	49 21	0 46	0 03	Havre	289	−0 40	−1 11	− 2.4	0.0	0.86
27	Courseulles	49 20	0 27	0 02	Havre	289	−0 21	−0 46	− 2.4	−0.2	0.88
28	Oystreham	49 17	0 15	0 01	Havre	289	−0 11	−0 15	− 1.4	−0.2	0.92
29	Dives	49 18	0 05	0 00	Havre	289	−0 02	−0 07	− 1.4	−0.2	0.92
			East.								
30	Havre, Seine River	49 29	0 06	0 00	Havre	289	0 00	0 00	0.0	0.0	1.00
31	Honfleur, Seine River	49 25	0 13	0 01	Havre	289	+0 07	+0 04	+ 0.8	+0.1	1.01
32	Quillebœuf, Seine River	49 28	0 31	0 02	Havre	289	+0 34	+0 19	−11.6	−1.4	0.42
33	Fécamp	49 46	0 22	0 01	Havre	289	+1 04	+0 49	+ 0.7	+0.1	1.03
34	St. Valery-en-Caux	49 52	0 42	0 03	Havre	289	+1 29	+1 22	+ 3.8	+0.6	1.20
35	Dieppe	49 56	1 05	0 04	Havre	289	+1 55	+1 38	+ 4.2	+0.6	1.21
36	Treport	50 04	1 22	0 05	Havre	289	+2 04	+1 35	+ 5.2	+0.8	1.25
37	St. Valery-sur-Somme	50 11	1 38	0 07	Dover	309	+0 37	+0 23	+ 8.6	+1.6	1.46
38	Boulogne	50 44	1 35	0 06	Dover	309	+0 18	+0 04	+ 5.6	+1.4	1.29
39	Cape Griznez	50 52	1 35	0 06	Dover	309	+0 17	+0 03	+ 2.4	+1.0	1.10
40	Calais	50 58	1 51	0 07	Dover	309	+0 38	+0 24	+ 2.0	+0.8	1.07
41	Gravelines	51 01	2 06	0 08	Dover	309	+0 57	+0 28	+ 0.2	+0.6	0.97
42	Dunkerque	51 03	2 21	0 09	Dover	309	+0 55	+0 07	− 1.8	+0.4	0.85
	THE BRITISH ISLANDS.										
	Scotland, east coast.		*West.*				*Greenwich time.*				
43	Duncansby Head	58 39	3 00	0 12	Edinburgh	293	−4 26	−4 29	− 5.6	−0.6	0.60
44	Wick	58 26	3 05	0 12	Edinburgh	293	−3 16	−3 19	− 5.4	−0.6	0.60
45	Doornoch Road	57 52	4 02	0 16	Edinburgh	293	−2 32	−2 35	− 4.7	−0.5	0.66
46	Cromarty	57 41	4 02	0 16	Edinburgh	293	−2 37	−2 40	− 2.2	−0.2	0.83
47	Inverness	57 28	4 14	0 17	Edinburgh	293	−1 51	−1 54	− 3.6	−0.4	0.78
48	Banff	57 40	2 31	0 10	Edinburgh	293	−1 45	−1 48	− 5.4	−0.6	0.61
49	Peterhead	57 30	1 46	0 07	Edinburgh	293	−1 42	−1 45	− 4.0	−0.8	0.78
50	Aberdeen	57 09	2 07	0 08	Edinburgh	293	−1 15	−1 18	− 3.7	−0.7	0.75
51	Stonehaven	56 58	2 12	0 09	Edinburgh	293	−1 04	−1 07	− 1.8	−0.4	0.89
52	Montrose	56 42	2 26	0 10	Edinburgh	293	+0 04	+0 01	− 2.0	−0.4	0.88
53	Arbroath	56 33	2 35	0 10	Edinburgh	293	−0 38	−0 41	− 1.9	−0.5	0.89
54	Tay River Entrance	56 27	2 43	0 11	Edinburgh	293	−0 06	−0 09	− 0.2	−0.2	1.01
55	Dundee	56 28	2 58	0 12	Edinburgh	293	+0 21	−0 18	− 1.6	−0.4	0.91
56	Fife Ness	56 17	2 35	0 10	Edinburgh	293	−0 08	−0 06	− 1.2	−0.4	0.93
57	Burntisland, Firth of Forth	56 04	3 14	0 13	Edinburgh	293	+0 14	+0 11	+ 0.2	−0.2	1.04
58	Alloa, Firth of Forth	56 08	3 52	0 15	Edinburgh	293	+1 20	+1 17	+ 1.4	−0.2	1.12
59	Granton, Firth of Forth	55 59	3 15	0 13	Edinburgh	293	+0 10	+0 07	0.0	−0.2	1.02
60	Edinburgh (Leith), Firth of Forth.	55 59	3 10	0 13	Edinburgh	293	0 00	0 00	0.0	0.0	1.00
61	Dunbar	56 00	2 31	0 10	Edinburgh	293	−0 05	−0 08	− 1.4	−0.4	0.92
62	Eyemouth	55 52	2 05	0 08	Edinburgh	293	0 00	−0 03	− 1.6	−0.4	0.91

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	5 33	11 58	5 31a	12 00a	22.8	30.5	13.8	22.3	0.8	0.9	.....	1.1	15.2	11.2	16.0
2	5 35	12 00	5 33a	12 02a	24.0	32.2	14.0	23.5	0.8	1.0	.....	1.1	16.1	11.7	16.0
3	5 38	12 03	5 36a	12 05a	23.6	31.7	13.8	23.1	0.8	1.0	.....	1.1	15.8	11.5	16.0
4	5 40	12 07	5 38a	12 09a	23.3	31.3	13.6	22.8	0.8	0.9	.....	1.1	15.6	11.4	16.0
5	5 42	12 12	5 40a	12 14a	22.4	30.0	13.1	21.9	0.8	0.9	.....	1.1	15.0	11.0	16.0
6	5 40	12 16	5 38a	12 18a	23.8	31.9	13.9	23.3	0.8	1.0	.....	1.1	16.0	11.6	16.0
7	5 37	12 15	5 35a	12 17a	23.6	31.7	13.8	23.1	0.8	1.0	.....	1.1	15.8	11.5	16.0
8	5 39	12 20	5 37a	12 22a	24.6	33.0	14.4	24.1	0.8	1.0	.....	1.2	16.5	12.0	16.0
9	5 43	0 04	5 41a	0 06b	26.8	36.0	15.7	26.3	0.9	1.0	2 39	1.2	18.0	13.2	15.5
10	5 42	0 05	5 40a	0 07b	27.5	36.8	16.1	27.0	0.9	1.0	.....	1.2	18.4	13.5	15.5
11	5 50	0 09	5 48a	0 11b	27.4	36.7	16.0	26.9	0.9	1.0	.....	1.2	18.4	13.4	15.5
12	5 57	0 11	5 55a	0 13b	25.9	34.7	15.2	25.4	0.9	1.0	.....	1.2	17.4	12.7	15.5
13	6 02	0 13	6 00a	0 15b	25.1	33.7	14.7	24.6	0.8	1.0	.....	1.2	16.8	12.3	15.5
14	6 07	0 15	6 05a	0 17b	23.0	30.8	13.5	22.5	0.8	0.9	.....	1.1	15.4	11.3	15.5
15	6 21	0 30	6 19a	0 32b	20.0	26.8	11.7	19.5	0.8	0.9	.....	1.0	13.4	9.8	15.5
16	5 55	0 04	5 53a	0 06b	25.9	34.7	15.2	25.4	0.9	1.0	.....	1.2	17.4	12.7	15.5
17	5 46	12 01	5 44a	12 03a	25.9	34.7	15.2	25.4	0.9	1.0	.....	1.2	17.4	12.7	15.5
18	6 09	0 00	6 07a	0 02b	23.3	31.2	13.6	22.8	0.8	0.9	.....	1.1	15.6	11.4	16.0
19	6 12	0 07	6 08a	0 19b	19.4	26.0	11.5	19.7	0.6	1.2	.....	1.3	13.0	10.0	16.0
20	6 20	0 15	6 16a	0 27b	11.6	15.5	6.9	11.8	0.5	0.9	.....	1.0	8.8	6.0	16.0
21	6 21	0 16	6 17a	0 28b	12.8	17.2	7.6	13.0	0.5	1.0	.....	1.0	8.6	6.6	16.0
22	7 01	1 00	6 57a	1 12b	11.4	15.2	6.8	11.6	0.5	0.9	.....	1.0	7.6	5.9	16.0
23	7 30	1 44	7 26a	1 55b	13.2	17.6	7.8	13.4	0.5	1.0	3 16	1.0	8.8	6.8	15.5
24	8 14	2 37	8 10a	2 49b	12.7	17.0	7.5	12.9	0.5	1.0	.....	1.0	8.5	6.6	15.5
25	8 13	2 45	8 09a	2 57b	13.8	18.5	8.2	14.0	0.5	1.0	.....	1.1	9.2	7.1	15.5
26	8 20	3 00	8 16a	3 12b	14.9	20.0	8.9	15.1	0.5	1.1	.....	1.1	10.0	7.7	15.0
27	8 40	3 26	8 37a	3 26b	15.2	19.8	9.7	16.2	0.3	0.8	.....	0.9	9.9	8.2	15.0
28	8 53	3 58	8 50a	3 58b	16.0	20.8	10.2	17.1	0.3	0.9	.....	0.9	10.4	8.7	15.0
29	9 01	4 07	8 58a	4 07b	16.0	20.8	10.2	17.1	0.3	0.9	.....	0.9	10.4	8.7	15.0
30	9 03	4 14	9 00a	4 14b	17.3	22.5	11.0	18.4	0.4	0.9	4 18	0.9	11.2	9.3	14.5
31	9 09	4 17	9 06a	4 17b	17.5	22.8	11.1	18.7	0.4	0.9	.....	0.9	11.4	9.4	14.5
32	9 35	4 31	9 31a	4 32b	7.2	9.4	4.6	7.9	0.2	0.6	.....	0.6	4.7	4.1	14.5
33	10 06	5 02	10 03a	5 02b	17.9	23.3	11.4	19.1	0.4	0.9	.....	0.9	11.6	9.6	14.5
34	10 29	5 33	10 26a	5 33b	20.6	26.8	13.1	21.8	0.4	1.0	.....	1.0	13.4	11.1	14.5
35	10 54	5 48	10 51a	5 48b	20.9	27.3	13.3	22.1	0.4	1.0	.....	1.0	13.6	12.2	14.5
36	11 02	5 44	10 59a	5 44b	21.7	28.3	13.8	22.9	0.4	1.0	.....	1.0	14.2	11.6	14.5
37	11 38	6 12	11 36a	6 14b	22.0	28.5	14.5	21.5	0.6	0.7	.....	0.8	14.2	10.7	14.5
38	11 18	5 52	11 16a	5 54b	19.4	25.2	12.8	19.0	0.5	0.6	.....	0.7	12.6	9.5	14.5
39	11 17	5 51	11 15a	5 53b	16.6	21.5	11.0	16.2	0.5	0.6	.....	0.7	10.8	8.1	14.5
40	11 39	6 13	11 37a	6 15b	16.2	21.0	10.7	15.8	0.5	0.6	.....	0.7	10.5	7.9	14.5
41	11 59	6 16	11 57a	6 18b	14.6	19.0	9.6	14.2	0.5	0.5	.....	0.6	9.5	7.1	14.5
42	11 58	5 58	11 56a	6 00b	12.9	16.8	8.5	12.5	0.4	0.5	.....	0.6	8.4	6.3	14.5
43	10 00	3 47	9 56a	3 50b	7.3	9.8	4.2	8.5	0.6	1.0	.....	0.8	4.9	4.2	19.0
44	11 10	4 57	11 05a	5 00b	7.3	9.9	4.2	8.6	0.6	1.0	.....	0.8	5.0	4.3	19.0
45	11 50	5 37	11 55a	5 40b	8.0	10.8	4.6	9.4	0.7	1.1	.....	0.9	5.4	4.7	19.0
46	11 45	5 32	11 40a	5 35b	10.1	13.7	5.9	13.9	0.7	1.2	.....	1.0	6.8	6.9	19.0
47	0 05	6 17	0 00b	6 20b	8.9	12.0	5.2	10.5	0.7	1.1	.....	1.0	6.0	5.2	19.0
48	0 18	6 30	0 13b	6 33b	7.5	10.1	4.4	8.8	0.6	1.0	.....	0.9	5.0	4.4	18.5
49	0 24	6 36	0 19b	6 39b	8.9	11.2	6.1	10.1	0.7	1.1	.....	1.0	5.6	5.0	18.0
50	0 50	7 02	0 45b	7 05b	9.2	11.7	6.4	10.5	0.7	1.1	.....	1.0	5.8	5.2	18.0
51	1 00	7 12	0 55b	7 15b	10.9	13.8	7.5	12.4	0.7	1.2	.....	1.1	6.9	6.2	18.0
52	1 07	8 19	2 02b	8 22b	10.7	13.6	7.4	12.2	0.7	1.2	.....	1.1	6.8	6.1	18.0
53	1 25	7 37	1 20b	7 40b	10.8	13.7	7.5	12.3	0.7	1.2	.....	1.1	6.8	6.2	18.0
54	1 56	8 08	1 51b	8 11b	12.3	15.5	8.5	13.9	0.8	1.3	.....	1.5	7.8	7.0	18.0
55	2 22	8 34	2 17b	8 37b	11.1	14.1	7.7	12.6	0.7	1.2	.....	1.2	7.0	6.3	18.0
56	2 00	8 12	1 55b	8 15b	11.4	14.4	7.9	12.9	0.7	1.2	.....	1.2	7.2	6.5	18.0
57	2 14	8 26	2 09b	8 29b	12.7	16.1	8.8	14.4	0.8	1.3	.....	1.5	8.0	7.2	18.0
58	3 18	9 30	3 13b	9 33b	13.7	17.3	9.5	15.5	0.8	1.3	.....	1.7	8.6	7.8	18.5
59	2 10	8 22	2 05b	9 25b	12.5	15.8	8.6	14.2	0.8	1.3	.....	1.5	7.9	7.1	18.0
60	2 00	8 15	1 51b	8 18b	12.2	16.0	8.4	14.0	0.6	1.8	9 25	1.9	8.0	7.3	18.0
61	1 58	8 10	1 53b	8 13b	11.2	14.2	7.7	12.7	0.7	1.2	.....	1.2	7.1	6.3	18.0
62	2 05	8 17	2 00b	8 20b	11.1	14.0	7.7	12.6	0.7	1.2	.....	1.2	7.0	6.2	18.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	EUROPE (WEST COAST)—Cont'd.										
	THE BRITISH ISLANDS—continued.	North.	West.				Greenwich time.		Mean Low Water Springs.		
	England, east coast.	° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Berwick	55 46	1 59	0 08	Sheerness	301	+ 2 05	+ 2 23	− 1.8	+0.1	0.86
2	Holy Island	55 41	1 50	0 07	Sheerness	301	+ 2 16	+ 2 34	− 1.8	+0.1	0.86
3	Blyth	55 08	1 30	0 06	Sheerness	301	+ 3 00	+ 3 18	− 1.8	+0.1	0.86
4	North Shields	55 01	1 26	0 06	Sheerness	301	+ 3 06	+ 3 24	− 2.0	+0.1	0.85
5	Tyne River Entrance	55 01	1 25	0 06	Sheerness	301	+ 3 03	+ 3 21	− 1.6	+0.1	0.87
6	Newcastle, Tyne River	54 57	1 36	0 06	Sheerness	301	+ 3 17	+ 3 35	− 1.4	+0.2	0.88
7	Sunderland	54 55	1 21	0 05	Sheerness	301	+ 3 06	+ 3 24	− 2.3	0.0	0.83
8	Seaham	54 50	1 19	0 05	Sheerness	301	+ 3 08	+ 3 26	− 2.3	0.0	0.83
9	West Hartlepool	54 41	1 12	0 05	Sheerness	301	+ 3 13	+ 3 33	− 2.7	−0.1	0.81
10	Whitby	54 30	0 37	0 02	Sheerness	301	+ 3 26	+ 3 44	− 1.8	+0.1	0.86
11	Scarborough	54 17	0 23	0 02	Sheerness	301	+ 3 52	+ 4 09	− 1.4	+0.2	0.88
12	Filey Bay	54 12	0 17	0 01	Sheerness	301	+ 4 00	+ 4 16	− 1.1	+0.2	0.91
13	Flamborough Head	54 07	0 05	0 00	Hull	297	− 1 40	− 1 55	− 4.0	−0.2	0.77
14	Bridlington	54 06	0 12	0 01	Hull	297	− 1 30	− 1 47	− 4.0	−0.2	0.77
15	Great Grimsby, Humber River	53 34	0 05	0 00	Hull	297	− 0 34	− 0 52	− 1.0	+0.2	0.93
16	HULL, Humber River	53 44	0 20	0 01	Hull	297	0 00	0 00	0.0	0.0	1.00
17	Goole, Humber River	53 41	0 58	0 04	Hull	297	+ 1 20	+ 1 12	− 6.7	−0.5	0.62
			East.								
18	Spurn Point, Humber River	53 35	0 07	0 00	Hull	297	− 0 44	− 1 02	− 1.6	0.0	0.90
19	Boston Dock	52 57	0 00	0 00	Hull	297	+ 0 20	+ 0 02	+ 0.4	+0.4	1.01
20	Lynn Deep	53 01	0 26	0 02	Hull	297	− 0 12	− 0 30	+ 2.2	+0.6	1.10
21	Wells Harbor	52 57	0 50	0 03	Hull	297	+ 0 47	+ 0 29	− 7.6	−0.6	0.57
22	Blakeney Bar	52 58	1 00	0 04	Hull	297	+ 0 16	− 0 02	− 4.9	−0.3	0.72
23	Yarmouth Road	52 35	1 44	0 07	Sheerness	301	+ 8 47	+ 8 58	− 9.8	−1.1	0.35
24	Lowestoft	52 29	1 45	0 07	Sheerness	301	+ 9 29	+ 9 40	− 9.5	−1.0	0.37
25	Orford Ness	52 05	1 34	0 06	Sheerness	301	+10 48	+10 59	− 8.0	−0.9	0.47
26	Harwich	51 56	1 19	0 05	Sheerness	301	+11 40	+11 51	− 5.0	−0.6	0.67
27	Nore (light vessel), Thames River	51 29	0 48	0 03	Sheerness	301	+ 0 06	+ 0 17	− 1.4	−0.2	0.91
28	SHEERNESS, Thames River	51 27	0 45	0 03	Sheerness	301	0 00	0 00	0.0	0.0	1.00
29	Chatham, Thames River	51 23	0 30	0 02	Sheerness	301	+ 0 48	+ 0 59	+ 1.0	+0.1	1.07
30	Gravesend, Thames River	51 26	0 22	0 01	Sheerness	301	+ 0 43	+ 0 54	+ 1.4	+0.1	1.09
31	Woolwich, Thames River	51 29	0 04	0 00	Sheerness	301	+ 0 51	+ 1 27	+ 1.4	+0.1	1.09
32	Greenwich, Thames River	51 28	0 00	0 00	London Bridge	305	− 0 14	− 0 44	− 2.0	−0.1	0.93
			West.								
33	London Docks, Thames River	51 30	0 04	0 00	London Bridge	305	− 0 07	− 0 34	− 0.5	0.0	0.98
34	LONDON BRIDGE, Thames River	51 32	0 06	0 00	London Bridge	305	0 00	0 00	0.0	0.0	1.00
			East.								
35	Margate	51 23	1 23	0 06	Sheerness	301	− 1 07	− 0 36	− 1.6	+0.1	0.87
36	Ramsgate	51 20	1 25	0 06	Sheerness	301	− 1 16	− 0 12	− 0.9	−0.3	0.96
37	Deal	51 14	1 25	0 06	Sheerness	301	− 1 37	− 0 42	− 1.1	+0.2	0.91
	England, south coast.										
38	DOVER	51 07	1 19	0 05	Dover	309	0 00	0 00	0.0	0.0	1.00
39	Folkestone	51 05	1 12	0 05	Dover	309	− 0 11	− 1 11	+ 0.9	+0.7	1.01
40	Dungeness	50 55	0 58	0 04	Dover	309	− 0 32	− 1 32	+ 2.4	+1.0	1.10
41	Rye Bay	50 56	0 47	0 03	Dover	309	+ 0 04	− 0 56	+ 2.6	+1.0	1.11
42	Hastings	50 51	0 36	0 02	Dover	309	− 0 22	− 1 22	+ 4.4	+1.2	1.21
43	Beachy Head	50 44	0 13	0 01	Dover	309	+ 0 06	− 0 54	+ 0.9	+0.7	1.01
44	Newhaven	50 47	0 04	0 00	Dover	309	+ 0 38	− 0 22	+ 0.9	+0.7	1.01
			West.								
45	Brighton	50 49	0 08	0 01	Dover	309	+ 0 08	− 0 57	+ 0.6	+0.8	0.99
46	Shoreham	50 50	0 15	0 01	Dover	309	+ 0 22	− 0 38	− 0.9	+0.5	0.91
47	Littlehampton	50 48	0 32	0 02	Dover	309	+ 0 09	− 0 51	− 2.6	+0.2	0.81
48	Selsea Bill	50 44	0 47	0 03	Dover	309	+ 0 35	− 0 25	− 2.3	+0.3	0.83
49	Portsmouth	50 47	1 06	0 04	Dover	309	+ 0 32	− 1 28	− 4.9	0.0	0.68
50	Calshot Castle	50 49	1 17	0 05	Dover	309	+ 0 22	− 0 38	− 4.2	0.0	0.72
51	Southampton	50 54	1 24	0 06	Dover	309	+ 2 08	+ 1 03	− 5.3	−0.1	0.66
52	Cowes, Isle of Wight	50 45	1 18	0 05	Dover	309	+ 0 07	− 0 53	− 5.8	−0.2	0.62
53	Bembridge Point, Isle of Wight	50 41	1 04	0 04	Dover	309	− 0 09	− 1 09	− 4.4	0.0	0.70
54	Yarmouth, Isle of Wight	50 41	1 31	0 06	Dover	309	− 1 07	− 2 07	−10.6	−0.8	0.34
55	Christchurch	50 44	1 46	0 07	Dover	309	− 0 56	− 0 56	−12.8	−0.7	0.20
56	Poole Entrance	50 40	1 56	0 08	Dover	309	− 2 55	− 2 55	−11.5	−0.3	0.26
57	Portland Breakwater	50 34	2 25	0 10	Dover	309	− 4 31	− 4 52	−11.4	−0.4	0.27
58	Bridport	50 42	2 45	0 11	Dover	309	− 4 56	− 5 56	− 7.6	+0.6	0.46
59	Lyme Regis	50 43	2 56	0 12	Dover	309	− 4 40	− 5 40	− 7.4	+0.6	0.47
60	Exmouth	50 37	3 26	0 14	Brest	285	+ 2 39	+ 2 30	− 7.7	−1.1	0.55
61	Teignmouth	50 32	3 30	0 14	Brest	285	+ 2 09	+ 2 00	− 6.0	−0.8	0.65
62	Torquay, Torbay	50 27	3 32	0 14	Brest	285	+ 2 14	+ 2 05	− 5.4	−0.8	0.68
63	Dartmouth	50 21	3 34	0 14	Brest	285	+ 2 24	+ 2 15	− 4.8	−0.8	0.72
64	Start Point	50 13	3 38	0 15	Brest	285	+ 1 50	+ 1 41	− 4.2	−0.6	0.76

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	2 08	8 28	2 03*b*	8 31*b*	11.6	15.0	7.5	13.3	0.8	1.5	.....	1.2	7.5	6.8	17.5
2	2 20	8 40	2 15*b*	8 43*b*	11.6	15.0	7.5	13.3	0.8	1.5	.....	1.2	7.5	6.8	17.5
3	3 05	9 25	3 00*b*	9 28*b*	11.6	15.0	7.5	13.3	0.8	1.5	.....	1.2	7.5	6.8	17.0
4	3 11	9 31	3 06*b*	9 34*b*	11.4	14.8	7.4	13.1	0.8	1.5	.....	1.2	7.4	6.7	17.0
5	3 08	9 28	3 03*b*	9 31*b*	11.7	15.2	7.6	13.4	0.8	1.5	.....	1.2	7.6	6.8	17.0
6	3 22	9 42	3 14*b*	9 46*b*	11.9	15.5	7.7	13.7	0.8	1.6	.....	1.7	7.8	7.0	17.0
7	3 12	9 32	3 04*b*	9 37*b*	11.2	14.5	7.3	12.9	0.8	1.5	.....	1.7	7.2	6.6	17.0
8	3 14	9 34	3 06*b*	9 39*b*	11.2	14.5	7.3	12.9	0.8	1.5	.....	1.7	7.2	6.6	17.0
9	3 19	9 41	3 11*b*	9 44*b*	10.9	14.1	7.1	12.7	0.8	1.6	11 16	1.7	7.1	6.6	17.0
10	3 35	9 55	3 27*b*	10 00*b*	11.6	15.0	7.5	13.4	0.8	1.6	.....	1.7	7.5	6.9	16.5
11	4 01	10 20	3 53*b*	10 24*b*	11.9	15.5	7.7	13.7	0.8	1.6	.....	1.7	7.8	7.0	16.0
12	4 10	10 28	4 02*b*	10 33*b*	12.2	15.8	7.9	14.2	0.9	1.7	.....	1.8	7.9	7.3	16.0
13	4 20	10 36	4 13*b*	10 40*b*	12.5	15.8	8.8	12.6	0.8	1.8	.....	1.8	7.9	6.4	16.0
14	4 29	10 43	4 22*b*	10 47*b*	12.5	15.8	8.8	12.6	0.8	1.8	.....	1.8	7.9	6.4	16.0
15	5 26	11 39	5 19*b*	11 43*b*	15.1	19.1	10.6	15.2	0.9	1.9	.....	1.9	9.6	7.8	16.0
16	5 59	0 05	5 52*b*	0 08*a*	16.3	19.9	11.9	17.0	0.9	2.0	13 42	2.0	10.0	8.8	16.0
17	7 16	1 14	7 08*b*	1 18*a*	10.1	12.8	7.1	10.2	0.7	1.6	.....	1.6	6.4	5.2	16.0
18	5 16	11 29	5 11*b*	11 32*b*	14.6	18.5	10.2	14.7	0.9	1.9	.....	1.9	9.2	7.5	15.5
19	6 20	0 08	6 14*b*	0 11*a*	16.4	20.8	11.5	16.5	0.9	2.0	.....	2.0	10.4	8.4	15.5
20	5 50	12 03	6 44*b*	12 06*b*	18.0	22.8	12.6	18.1	0.9	2.1	.....	2.1	11.4	9.2	15.5
21	6 50	0 38	6 42*b*	0 42*a*	9.3	11.8	6.5	9.4	0.7	1.5	.....	1.5	5.9	4.8	15.0
22	6 20	0 08	6 13*b*	0 12*a*	11.7	14.8	8.2	11.8	0.7	1.7	.....	1.7	7.4	6.0	15.0
23	9 05	2 53	9 15*b*	2 49*a*	4.7	5.8	3.4	5.8	0.3	1.0	.....	1.0	2.9	3.0	15.0
24	9 47	3 35	9 57*b*	3 31*a*	5.0	6.2	3.6	6.1	0.3	1.0	.....	1.0	3.1	3.2	15.0
25	11 05	4 53	11 14*b*	4 49*a*	6.3	7.8	4.5	7.6	0.4	1.2	.....	1.2	3.9	4.0	15.0
26	11 56	5 44	12 03*b*	5 41*a*	9.1	11.2	6.6	10.6	0.4	1.4	.....	1.4	5.6	5.6	15.0
27	0 20	6 33	0 26*b*	6 30*b*	12.3	15.2	8.9	13.9	0.4	1.6	.....	1.6	7.6	7.3	15.0
28	0 14	6 16	0 07*b*	6 17*b*	13.5	16.9	9.5	15.0	0.3	1.7	7 05	1.7	8.5	7.8	15.0
29	1 01	7 14	1 07*b*	7 11*b*	14.4	17.8	10.4	16.2	0.5	1.7	.....	1.7	8.9	8.4	15.0
30	0 55	7 08	1 01*b*	7 05*b*	14.7	18.2	10.6	16.6	0.5	1.8	.....	1.8	9.1	8.6	15.0
31	1 02	7 40	1 08*b*	7 37*b*	14.7	18.2	10.6	16.6	0.5	1.8	.....	1.8	9.1	8.6	15.0
32	1 10	7 46	1 05*b*	7 47*b*	15.8	18.8	12.6	17.4	0.4	1.6	.....	1.4	9.4	9.0	15.5
33	1 17	7 56	1 12*b*	7 57*b*	17.2	20.5	13.8	18.9	0.4	1.7	.....	1.4	10.2	9.7	15.5
34	1 24	8 30	1 20*b*	8 31*b*	17.6	20.9	14.1	19.3	0.4	1.7	8 56	1.4	10.4	10.0	15.5
35	11 35	5 43	11 30*a*	5 45*b*	11.7	15.2	7.6	13.3	0.4	1.0	.....	1.1	7.6	6.8	14.5
36	11 26	6 07	11 22*a*	6 09*b*	12.9	15.8	9.3	14.8	0.6	1.1	6 52	1.2	7.9	7.5	14.5
37	11 05	5 37	11 00*a*	5 39*b*	12.2	15.8	7.9	13.8	0.4	1.0	.....	1.1	7.9	7.0	14.5
38	11 08	5 56	11 06*a*	5 58*b*	15.1	18.2	11.4	16.9	0.5	0.7	8 00	0.7	9.1	8.5	14.5
39	10 57	4 45	10 55*a*	4 47*b*	15.3	19.8	10.1	16.9	0.5	0.5	.....	0.7	9.9	8.4	14.5
40	10 35	4 23	10 33*a*	4 25*b*	16.6	21.5	11.0	18.4	0.5	0.6	.....	0.7	10.8	9.2	15.0
41	11 10	4 58	11 08*a*	5 00*b*	16.8	21.8	11.1	18.6	0.5	0.6	.....	0.7	10.9	9.3	15.0
42	10 43	4 31	10 41*a*	4 33*b*	18.3	23.8	12.1	20.1	0.5	0.6	.....	0.7	11.9	10.0	15.0
43	11 10	4 58	10 08*a*	5 00*b*	15.3	19.8	10.1	16.9	0.5	0.5	.....	0.7	9.9	8.4	15.0
44	11 41	5 29	11 39*a*	5 31*b*	15.3	19.8	10.1	16.9	0.5	0.5	.....	0.7	9.9	8.4	15.0
45	11 05	4 53	11 03*a*	4 55*b*	15.0	19.5	9.9	16.6	0.5	0.5	.....	0.7	9.8	8.3	15.0
46	11 24	5 12	11 22*a*	5 14*b*	13.7	17.8	9.0	15.0	0.4	0.4	.....	0.6	8.9	7.4	15.0
47	11 10	4 58	11 08*a*	5 00*b*	12.2	15.8	8.1	13.5	0.4	0.4	.....	0.6	7.9	6.5	15.5
48	11 35	5 23	11 33*a*	5 25*b*	12.5	16.2	8.3	13.8	0.4	0.4	.....	0.6	8.1	6.8	15.5
49	11 31	4 19	11 29*a*	4 21*b*	10.2	13.2	6.7	11.5	0.4	0.4	.....	0.5	6.6	5.7	15.5
50	11 20	5 08	11 17*a*	5 11*b*	10.9	14.1	7.2	12.3	0.4	0.5	.....	0.6	7.0	5.2	16.0
51	0 35	6 48	0 33*b*	6 50*b*	9.9	12.8	6.5	11.2	0.4	0.4	.....	0.5	6.4	4.8	16.0
52	11 05	4 53	11 02*a*	4 55*b*	9.4	12.2	6.2	10.5	0.4	0.3	.....	0.5	6.1	4.6	16.0
53	10 50	4 38	10 47*a*	4 41*b*	10.6	13.8	7.0	12.0	0.4	0.5	.....	0.6	6.9	5.1	15.5
54	9 50	3 38	9 46*a*	3 42*b*	5.2	6.8	3.4	6.2	0.3	0.3	.....	0.4	3.4	2.5	16.0
55	10 00	4 48	9 48*a*	5 00*b*	3.0	4.8	0.8	3.5	0.6	0.5	.....	0.8	2.4	1.7	16.0
56	8 00	2 48	7 50*a*	2 58*b*	3.9	6.3	1.0	4.4	0.7	0.6	.....	0.9	3.2	2.2	16.0
57	6 21	0 48	6 13*a*	0 56*b*	4.1	6.4	1.2	5.1	0.7	0.8	3 30	0.9	3.2	2.6	16.5
58	5 55	12 08	5 48*a*	12 16*a*	6.9	11.1	1.7	7.6	0.9	0.8	.....	1.2	5.6	3.8	16.5
59	6 10	12 23	6 03*a*	12 31*a*	7.1	11.4	1.8	7.8	0.9	0.8	.....	1.2	5.7	3.9	16.5
60	6 15	0 03	6 11*a*	0 07*b*	8.1	10.8	4.9	8.2	0.6	0.4	.....	0.6	5.4	4.0	17.0
61	5 45	11 58	5 42*a*	12 02*a*	9.6	12.8	5.9	9.7	0.6	0.4	.....	0.7	6.4	4.8	17.0
62	5 50	12 03	5 47*a*	12 07*a*	10.0	13.4	6.1	10.1	0.7	0.4	.....	0.7	6.7	5.0	17.0
63	6 00	12 13	5 57*a*	12 17*a*	10.6	14.1	6.5	10.7	0.7	0.4	.....	0.7	7.0	5.3	17.0
64	5 25	11 38	5 22*a*	11 42*a*	11.2	14.9	6.8	11.3	0.7	0.4	.....	0.8	7.4	5.6	17.0

Number.	Station.	Geographic position. Latitude.	Longitude. Arc.	Longitude. Time.	Standard port for reference. Name.	Page.	Tidal differences. Time. HW.	Time. LW.	Height. HW.	Height. LW.	Ratio of ranges.
	EUROPE (WEST COAST)—Cont'd.										
	THE BRITISH ISLANDS—continued.										
	England, south coast—Continued.	*North.*	*West.*				*Greenwich time.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Bolt Head	50 12	3 48	0 15	Brest	285	+1 55	+1 46	− 4.5	−0.7	0.74
2	Plymouth Breakwater	50 20	4 09	0 17	Brest	285	+1 47	+1 38	− 3.8	−0.6	0.78
3	Devonport	50 22	4 10	0 17	Brest	285	+1 57	+1 48	− 3.6	−0.6	0.79
4	East Looe	50 20	4 29	0 18	Brest	285	+1 38	+1 29	− 2.5	−0.3	0.85
5	Fowey	50 20	4 38	0 19	Brest	285	+1 29	+1 20	− 4.2	−0.6	0.76
6	Mevagissey	50 16	4 47	0 19	Brest	285	+1 19	+1 10	− 3.8	−0.6	0.77
7	Truro, town quay	50 15	5 04	0 20	Brest	285	+1 18	+1 09	− 8.4	−1.2	0.51
8	Falmouth	50 08	5 04	0 20	Brest	285	+1 10	+1 01	− 3.4	−0.4	0.80
9	Helford Entrance	50 06	5 06	0 20	Brest	285	+1 00	+0 51	− 3.8	−0.6	0.77
10	Coverack	50 02	5 07	0 20	Brest	285	+0 50	+0 41	− 4.6	−0.6	0.73
11	Lizard Head	49 58	5 13	0 21	Brest	285	+1 16	+1 07	− 4.8	−0.6	
12	Penzance	50 07	5 32	0 22	Brest	285	+0 52	+0 43	− 3.1	−0.5	0.72
13	St. Agnes Island, Scilly Islands	49 54	6 21	0 25	Brest	285	+0 50	+0 41	− 3.2	−0.4	0.82
14	St. Mary Island, Scilly Islands	49 55	6 19	0 25	Brest	285	+0 47	+0 38	− 3.2	−0.4	0.80
15	Trescow Island, Scilly Islands	49 57	6 22	0 25	Brest	285	+0 42	+0 33	− 3.1	−0.5	0.80
											0.82
	England, west coast.										
16	Cape Cornwall	50 08	5 43	0 23	Brest	285	+0 48	+0 39	− 1.2	−0.4	0.94
17	St. Ives	50 12	5 28	0 22	Brest	285	+1 02	+0 53	+ 1.2	0.0	1.09
18	Towan or New Quay	50 25	5 05	0 20	Brest	285	+0 58	+0 49	+ 1.8	0.0	1.12
19	Padstow Bay	50 34	4 55	0 20	Brest	285	+0 55	+0 46	+ 2.3	+0.1	1.15
20	Boscastle	50 41	4 43	0 19	Brest	285	+1 29	+1 20	+ 2.4	0.0	1.16
21	Budehaven	50 50	4 34	0 18	Brest	285	+1 58	+1 49	+ 3.0	+0.2	1.20
22	Lundy Island	51 10	4 40	0 19	Brest	285	+1 29	+1 20	+ 6.6	+0.6	1.41
23	Appledore, Torridge River	51 03	4 12	0 17	Brest	285	+2 12	+2 03	+ 3.0	+0.2	1.19
24	Bideford, Torridge River	51 00	4 13	0 17	Brest	285	+2 17	+2 08	− 3.0	−0.6	0.84
25	Barnstaple, Taw River	51 04	4 03	0 16	Brest	285	+2 41	+2 32	− 7.9	−1.3	0.55
26	Ilfracombe, Bristol Channel	51 12	4 07	0 16	Brest	285	+1 56	+1 47	+ 6.9	+0.7	1.42
27	Lynmouth, Bristol Channel	51 13	3 50	0 15	Brest	285	+2 15	+2 06	+ 9.8	+1.0	1.59
28	Minehead, Bristol Channel	51 13	3 28	0 14	Brest	285	+2 34	+2 25	+11.4	+1.2	1.69
29	Bridgewater Bar, Bristol Channel	51 12	3 03	0 12	Brest	285	+2 57	+2 48	+13.8	+1.6	1.83
30	Bridgewater, Bristol Channel	51 07	3 00	0 12	Brest	285	+4 07	+3 58	− 1.2	−0.4	0.94
31	Flatholm Island, Bristol Channel	51 23	3 07	0 12	Brest	285	+3 02	+2 53	+16.2	+1.8	1.97
32	Weston-super-Mare, Bristol Chan.	51 20	2 59	0 12	Brest	285	+3 00	+2 51	+15.6	+1.8	1.94
33	Bristol, Avon River	51 26	2 36	0 10	Brest	285	+3 20	+3 11	+10.5	+1.1	1.64
34	Chepstow, Severn River	51 37	2 39	0 11	Brest	285	+3 36	+3 27	+16.3	+1.9	1.98
35	Gloucester, Severn River	51 51	2 17	0 09	Brest	285	+5 49	+5 40	−12.4	−1.8	0.29
36	Newport, Severn River	51 34	2 59	0 12	Brest	285	+3 22	+3 13	+16.2	+1.8	1.97
	Wales.										
37	Cardiff, Bristol Channel	51 28	3 10	0 13	Brest	285	+3 08	+2 59	+14.9	+1.7	1.90
38	Nash Point, Bristol Channel	51 24	3 33	0 14	Brest	285	+2 34	+2 50	+11.9	+1.3	1.72
39	Swansea, Bristol Channel	51 37	3 56	0 16	Brest	285	+2 11	+2 02	+ 6.9	+0.7	1.42
40	Worms Head, Bristol Channel	51 33	4 19	0 17	Brest	285	+2 13	+2 04	+ 5.0	+0.4	1.31
41	Carmarthen, Towy River	51 50	4 19	0 17	Brest	285	+1 57	+1 48	+ 5.7	+0.5	1.35
42	Caldy Island	51 38	4 41	0 19	Brest	285	+2 09	+2 00	+ 5.2	+0.4	1.32
43	St. Anns Head, Milford Haven	51 40	5 10	0 21	Brest	285	+2 12	+2 03	+ 4.1	+0.3	1.26
44	Pembroke, Milford Haven	51 41	4 56	0 20	Brest	285	+2 11	+2 06	+ 2.8	+0.2	1.18
45	Smalls Light-House	51 43	5 40	0 23	Brest	285	+2 13	+2 04	+ 1.3	−0.1	1.10
46	Fishguard	51 59	4 57	0 20	Brest	285	+3 05	+2 56	− 6.4	−1.0	0.64
47	Cardigan	52 05	4 39	0 19	Brest	285	+3 13	+3 04	− 6.7	−1.1	0.67
48	New Quay	52 13	4 20	0 17	Brest	285	+3 47	+3 38	− 5.8	−1.0	0.74
49	Aberystwith	52 24	4 06	0 16	Brest	285	+3 51	+3 42	− 4.6	−0.8	0.74
50	Aberdovey	52 33	4 03	0 16	Brest	285	+4 01	+3 52	− 4.7	−0.9	0.74
51	Barmouth	52 43	4 04	0 16	Brest	285	+4 16	+4 07	− 4.6	−0.8	0.74
52	Pwllheli	52 54	4 26	0 18	Brest	285	+4 03	+3 54	− 4.0	−0.8	0.78
53	Bardsey Island	52 45	4 48	0 19	Brest	285	+3 53	+3 44	− 4.0	−0.8	0.78
54	Carnarvon, Menai Strait	53 07	4 19	0 17	Brest	285	+5 47	+5 38	− 3.4	−0.6	0.82
55	Beaumaris, Menai Strait	53 16	4 05	0 16	Brest	285	−5 44	−5 53	+ 3.4	+0.2	1.22
56	Holyhead	53 19	4 37	0 18	Brest	285	−5 57	−6 06	− 3.2	−0.6	0.83
57	Trwyn-Du Point	53 19	4 02	0 16	Liverpool	313	−0 42	−1 14	− 4.5	−0.3	0.80
58	Air Point, Dee River	53 20	3 19	0 13	Liverpool	313	−0 15	−0 47	− 2.0	0.0	0.91
	England, west coast—Continued.										
59	Chester, Dee River	53 11	2 55	0 12	Liverpool	313	+1 29	+0 32	−15.4	−1.6	0.36
60	Helbre Island, Mersey River	53 22	3 18	0 13	Liverpool	313	−0 18	−0 28	− 0.6	0.0	0.97
61	LIVERPOOL, Mersey River	53 24	3 00	0 12	Liverpool	313	0 00	0 00	0.0	0.0	1.00
62	Northwest Light Vessel	53 31	3 31	0 14	Liverpool	313	−0 04	−0 26	− 1.9	+0.1	0.91
63	Formby Point	53 32	3 11	0 13	Liverpool	313	−0 35	−1 07	− 1.4	+0.2	0.92

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	5 30	11 43	5 28a	11 47a	10.9	14.5	6.6	11.0	0.7	0.4	.....	0.7	7.2	5.4	17.0
2	5 20	11 33	5 18a	11 36a	11.5	15.3	7.0	11.6	0.7	0.4	.....	0.7	7.6	5.7	17.0
3	5 30	11 43	5 28a	11 46a	11.6	15.4	7.1	11.7	0.7	0.4	.....	0.7	7.7	5.8	17.0
4	5 10	11 23	5 08a	11 26a	12.5	16.7	7.6	12.6	0.7	0.5	.....	0.8	8.4	6.2	17.5
5	5 00	11 13	4 58a	11 17a	11.1	14.8	6.8	11.2	0.7	0.4	.....	0.7	7.4	5.5	17.5
6	4 50	11 03	4 48a	11 06a	11.4	15.2	7.0	11.5	0.7	0.4	.....	0.7	7.6	5.7	17.5
7	4 48	11 01	4 44a	11 06a	7.5	10.0	4.6	7.6	0.6	0.4	.....	0.6	5.0	3.7	17.5
8	4 40	10 53	4 37a	10 57a	11.8	15.8	7.2	11.9	0.7	0.4	.....	0.8	7.9	5.9	17.5
9	4 30	10 43	4 27a	10 46a	11.4	15.2	7.0	11.5	0.7	0.4	.....	0.7	7.6	5.7	17.5
10	4 20	10 33	4 17a	10 37a	10.7	14.3	6.5	10.8	0.7	0.4	.....	0.7	7.2	5.3	17.5
11	4 45	10 58	4 42a	11 02a	10.6	14.2	6.5	10.7	0.7	0.4	.....	0.7	7.1	5.3	17.5
12	4 20	10 33	4 17a	10 37a	12.1	16.1	7.4	12.2	0.7	0.5	.....	0.8	8.0	6.0	18.0
13	4 15	10 28	4 12a	10 32a	11.9	15.9	7.3	12.0	0.7	0.5	.....	0.8	8.0	5.9	18.0
14	4 12	10 25	4 09a	10 29a	11.9	16.0	7.3	12.0	0.7	0.5	.....	0.8	8.0	5.9	18.0
15	4 07	10 20	4 04a	10 24a	12.1	16.1	7.4	12.2	0.7	0.5	.....	0.8	8.0	6.0	18.0
16	4 15	10 28	4 10a	10 33a	13.8	17.9	9.0	13.2	0.8	0.8	.....	1.2	9.0	6.5	18.0
17	4 30	10 43	4 25a	10 47a	16.0	20.8	10.4	15.3	0.9	0.9	.....	1.2	10.4	7.6	18.0
18	4 28	10 41	4 23a	10 45a	16.5	21.4	10.7	15.8	0.9	0.9	.....	1.3	10.7	7.9	18.0
19	4 25	10 38	4 20a	10 42a	16.9	21.9	11.0	16.2	0.9	0.9	.....	1.3	11.0	8.1	17.5
20	5 00	11 13	4 55a	11 17a	17.1	22.0	11.1	16.2	0.9	0.9	.....	1.3	11.0	8.1	17.5
21	5 30	11 43	5 26a	11 47a	17.6	22.8	11.4	16.9	0.9	0.9	.....	1.3	11.4	8.4	17.5
22	5 00	11 13	4 56a	11 17a	20.7	26.9	13.5	20.0	1.0	1.0	.....	1.4	13.4	10.0	17.5
23	5 45	11 58	5 41a	12 02a	17.5	22.7	11.4	16.8	0.9	0.9	.....	1.3	11.4	8.4	17.5
24	5 50	12 03	5 45a	12 08a	12.3	16.0	8.0	11.7	0.8	0.8	.....	1.1	8.0	5.8	17.5
25	6 15	0 03	6 09a	0 09b	8.1	10.5	5.3	7.6	0.6	0.6	.....	0.9	5.2	3.8	17.5
26	5 30	11 43	5 26a	11 47a	20.9	27.1	13.6	20.1	1.0	1.0	.....	1.4	13.6	10.0	17.5
27	5 50	12 03	5 46a	12 06a	23.4	30.4	15.2	22.6	1.1	1.1	.....	1.5	15.2	11.3	17.5
28	6 10	12 23	6 06a	12 26a	24.8	32.2	16.1	24.0	1.1	1.1	.....	1.5	16.1	11.9	17.0
29	6 35	0 23	6 31a	0 26b	26.9	35.0	17.5	26.1	1.1	1.1	.....	1.6	17.5	13.0	17.0
30	7 45	1 33	7 40a	1 38b	13.8	17.9	9.0	13.2	0.8	0.8	.....	1.2	9.0	6.5	17.0
31	6 40	0 28	6 36a	0 31b	29.0	37.6	18.9	28.1	1.2	1.2	.....	1.7	18.8	14.0	17.0
32	6 38	0 26	6 34a	0 29b	28.5	37.0	18.5	27.6	1.2	1.2	.....	1.7	18.5	13.7	17.0
33	7 00	0 48	6 56a	0 51b	24.1	31.3	15.7	23.3	1.1	1.1	.....	1.5	15.6	11.6	16.5
34	7 15	1 03	7 11a	1 06b	29.1	37.8	18.9	28.2	1.2	1.2	.....	1.7	18.9	14.0	16.5
35	9 30	3 18	9 22a	3 25b	4.2	5.4	2.7	3.9	0.4	0.4	.....	0.6	2.7	1.9	16.5
36	7 00	0 48	6 56a	0 51b	29.0	37.7	18.9	28.1	1.2	1.2	.....	1.7	18.8	14.0	17.0
37	6 45	0 33	6 41a	0 36b	27.9	36.2	18.1	27.0	1.2	1.2	.....	1.7	18.1	13.4	17.0
38	6 10	0 23	6 06a	0 26b	25.3	32.8	16.4	24.4	1.1	1.1	.....	1.6	16.4	12.2	17.0
39	5 45	11 58	5 41a	12 01a	20.9	27.1	13.6	20.1	1.0	1.0	.....	1.5	13.6	10.0	17.5
40	5 46	11 59	5 42a	12 03a	19.3	25.0	12.5	18.4	1.0	1.0	.....	1.4	12.5	9.2	17.5
41	5 30	11 43	5 26a	11 47a	19.9	25.8	12.9	19.0	1.0	1.0	.....	1.4	12.9	9.6	17.5
42	5 40	11 53	5 36a	11 57a	19.5	25.3	12.7	18.7	1.0	1.0	.....	1.4	12.6	9.4	18.0
43	5 41	11 54	5 36a	11 58a	18.5	24.0	12.0	17.7	1.0	1.0	.....	1.4	12.0	9.8	18.0
44	5 41	11 58	5 37a	12 02a	17.4	22.6	11.3	16.7	0.9	0.9	.....	1.3	11.3	8.3	18.0
45	5 40	11 53	5 35a	11 57a	16.1	20.9	10.5	15.4	0.9	0.9	.....	1.3	10.4	7.6	18.0
46	6 35	0 23	6 29a	0 29b	9.4	12.2	6.1	8.9	0.7	0.7	.....	1.0	6.1	4.4	18.0
47	6 44	0 32	6 38a	0 38b	9.1	11.8	5.9	8.6	0.7	0.7	.....	1.0	5.9	4.3	18.0
48	7 20	1 08	7 14a	1 13b	9.9	12.9	6.4	9.4	0.7	0.7	.....	1.0	6.4	4.7	18.0
49	7 25	1 13	7 19a	1 18b	10.9	14.2	7.1	10.4	0.7	0.7	.....	1.1	7.1	5.1	17.5
50	7 35	1 23	7 29a	1 28b	10.9	14.1	7.1	10.4	0.7	0.7	.....	1.1	7.0	5.1	17.5
51	7 50	1 38	7 44a	1 43b	10.9	14.2	7.1	10.4	0.7	0.7	.....	1.1	7.1	5.1	17.5
52	7 35	1 23	7 29a	1 28b	11.4	14.8	7.4	10.8	0.8	0.8	.....	1.1	7.4	5.4	18.0
53	7 24	1 12	7 18a	1 17b	11.5	14.9	7.5	10.9	0.8	0.8	.....	1.1	7.4	5.5	18.0
54	9 20	3 08	9 15a	3 13b	12.0	15.6	7.8	11.4	0.8	0.8	.....	1.1	7.8	5.7	18.0
55	10 15	4 03	10 11a	4 07b	17.9	23.2	11.6	17.2	0.9	0.9	.....	1.3	11.6	8.6	18.0
56	10 00	3 48	9 55a	3 53b	12.2	15.8	7.9	11.6	0.8	0.8	.....	1.1	7.9	5.8	18.0
57	10 10	3 58	10 06a	4 03b	17.1	21.9	11.5	18.6	1.0	1.0	.....	1.4	11.0	9.3	18.0
58	10 40	4 28	10 36a	4 33b	19.3	24.8	12.9	20.9	1.1	1.1	.....	1.5	12.4	10.6	17.5
59	0 00	5 48	−0 06b	5 56b	7.6	9.8	5.1	8.6	0.7	0.7	.....	0.9	4.9	4.3	17.5
60	10 37	4 47	10 34a	4 50b	20.7	26.2	14.1	22.5	1.2	1.3	7 35	1.6	13.1	11.3	17.5
61	10 56	5 16	10 53a	5 18b	21.3	26.7	14.8	22.9	1.1	1.1	7 50	1.5	13.4	11.5	17.5
62	10 50	4 48	10 47a	4 51b	19.3	25.0	12.7	21.0	1.0	1.0	.....	1.4	12.5	10.5	17.5
63	10 20	4 08	10 17a	4 11b	19.6	25.5	12.9	21.3	1.0	1.0	.....	1.4	12.8	10.7	17.5

Number.	Station.	Geographic position. Latitude.	Longitude. Arc.	Longitude. Time.	Standard port for reference. Name.	Page.	Tidal differences. Time. HW.	Time. LW.	Height. HW.	Height. LW.	Ratio of ranges.
	EUROPE (WEST COAST)—Cont'd.										
	THE BRITISH ISLANDS—continued.										
	England, west coast—Continued.	*North.*	*West.*				*Greenwich time.*		*Mean Low Water Springs.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Stanner Point, Ribble River	53 45	3 01	0 12	Liverpool	313	−0 16	−0 48	− 1.6	+0.2	0.92
2	Preston, Ribble River	53 45	2 42	0 11	Liverpool	313	+0 08	−0 24	− 9.2	−0.8	0.61
3	Fleetwood, Morecambe Bay	53 56	3 00	0 12	Liverpool	313	+0 04	−0 28	+ 0.2	+0.4	0.99
4	Lancaster, Lune River	54 03	2 48	0 11	Liverpool	313	+0 08	−0 24	−16.6	−1.8	0.31
5	Barrow, Piel Harbor	54 07	3 14	0 13	Liverpool	313	+1 00	+0 28	+ 0.6	+0.4	1.00
6	Whitehaven, Solway Firth	54 33	3 36	0 14	Liverpool	313	+0 06	−0 26	− 1.1	+0.3	0.93
7	Workington, Solway Firth	54 39	3 35	0 14	Liverpool	313	−0 04	−0 36	− 1.4	+0.2	0.93
8	Maryport, Solway Firth	54 43	3 30	0 14	Liverpool	313	+0 16	−0 16	− 2.1	+0.1	0.90
9	Silloth, Solway Firth	54 52	3 24	0 14	Liverpool	313	+0 31	−0 01	− 1.4	+0.2	0.93
10	Port Carlisle, Solway Firth	54 56	3 13	0 13	Liverpool	313	+1 30	+0 33	− 6.5	−0.5	0.72
	Isle of Man.										
11	Ayre Point	54 25	4 22	0 17	Liverpool	313	+0 04	−0 28	− 6.6	−0.6	0.71
12	Ramsey	54 19	4 22	0 17	Liverpool	313	+0 09	−0 23	− 6.0	−0.4	0.74
13	Douglas	54 09	4 28	0 18	Liverpool	313	+0 10	−0 22	− 6.0	−0.4	0.74
14	Castletown	54 04	4 39	0 19	Liverpool	313	+0 09	−0 23	− 6.6	−0.6	0.71
15	Peel	54 14	4 42	0 19	Liverpool	313	+0 07	−0 25	− 9.8	−1.0	0.58
	Scotland, west coast.										
16	Barnkirk or Annan Foot	54 58	3 16	0 13	Greenock	317	+0 25	+0 39	+15.6	+1.6	2.54
17	Dumfries, Nith R., Solway Firth	55 04	3 36	0 14	Greenock	317	+0 01	+0 15	− 4.8	−0.5	0.54
18	Kirkcudbright	54 50	4 03	0 16	Greenock	317	−0 48	−0 33	+10.5	+1.1	2.04
19	Wigton	54 51	4 26	0 18	Greenock	317	−0 25	−0 11	+ 2.5	+0.3	1.25
20	Newton Stewart	54 57	4 28	0 18	Greenock	317	+0 05	+0 19	+ 0.5	+0.1	1.05
21	Port William	54 43	4 33	0 18	Greenock	317	−0 45	−0 31	+ 6.0	+0.8	1.59
22	Mull of Galloway	54 38	4 51	0 19	Greenock	317	−0 39	−0 25	+ 3.2	+0.4	1.32
23	Port Patrick	54 50	5 07	0 20	Greenock	317	−0 43	−0 29	+ 3.2	+0.4	1.31
24	Loch Ryan	55 00	5 09	0 21	Greenock	317	−0 40	−0 26	− 0.5	−0.1	0.98
25	Lamlash, Firth of Clyde	55 31	5 05	0 20	Greenock	317	−0 08	+0 06	− 1.3	−0.2	0.88
26	Ayr, Firth of Clyde	55 28	4 38	0 19	Greenock	317	−0 04	+0 10	− 2.2	−0.2	0.79
27	Ardrossan, Firth of Clyde	55 38	4 49	0 19	Greenock	317	−0 09	+0 05	− 2.2	−0.2	0.79
28	GREENOCK, Firth of Clyde	55 57	4 45	0 19	Greenock	317	0 00	0 00	0.0	0.0	1.00
29	Dumbarton, Clyde River	55 56	4 33	0 18	Greenock	317	+0 45	+0 59	+ 1.1	−0.1	0.90
30	Renfrew, Clyde River	55 54	4 25	0 18	Greenock	317	+1 15	+1 29	+ 0.4	0.0	0.97
31	Glasgow, Clyde River	55 52	4 14	0 17	Greenock	317	+1 34	+1 48	0.0	0.0	1.00
32	Inverary, Loch Fyne	56 14	5 05	0 20	Greenock	317	+0 07	+0 21	− 1.4	−0.2	0.87
33	Campbelton	55 26	5 36	0 22	Greenock	317	−0 11	+0 03	− 2.4	−0.2	0.27
34	Mull of Cantyre	55 19	5 48	0 23	Greenock	317	−1 20	−1 06	− 6.6	−0.6	0.35
35	Port Ellen, Islay Island	55 37	6 13	0 25	Greenock	317	+5 37	+5 51	− 5.8	−0.6	0.43
36	Crinan	56 06	5 33	0 22	Greenock	317	+5 19	+5 32	− 4.9	−0.5	0.52
37	Schallasaig, Colonsay Island	56 04	6 10	0 25	Greenock	317	+5 52	+6 05	− 0.4	0.0	0.98
38	Oban, Firth of Lorne	56 25	5 28	0 22	Greenock	317	+5 54	+6 07	+ 1.4	+0.2	1.14
39	Tobermory, Isle of Mull	56 37	6 04	0 24	Greenock	317	+6 06	+6 19	+ 1.4	+0.2	1.15
40	Heynish, Tiree Island	56 29	6 54	0 28	Greenock	317	+6 05	+6 18	− 0.5	+0.1	1.06
41	Loch Moidart	56 48	5 53	0 24	Greenock	317	+6 16	+6 29	+ 2.1	+0.3	1.21
42	Loch Nevis	57 01	5 49	0 23	Greenock	317	+6 20	+6 33	+ 2.8	+0.4	1.29
43	Kyle Rhea, Isle of Skye	57 14	5 40	0 23	Greenock	317	−5 50	−5 37	+ 3.4	+0.4	1.34
44	Kyle Akin, Loch Alsh	57 17	5 44	0 23	Greenock	317	−5 35	−5 22	+ 3.9	+0.5	1.38
45	Portree, Isle of Skye	57 24	6 11	0 25	Greenock	317	−5 18	−5 05	+ 3.2	+0.4	1.32
46	Loch Torridon	57 35	5 49	0 23	Greenock	317	−5 30	−5 17	+ 3.2	+0.4	1.33
47	Poolewe, Loch Ewe	57 47	5 40	0 23	Greenock	317	−5 15	−5 02	+ 2.8	+0.4	1.29
48	Ullapool, Loch Broom	57 56	5 14	0 21	Greenock	317	−5 15	−5 02	+ 2.8	+0.4	1.28
49	Loch Inver	58 09	5 17	0 21	Greenock	317	−5 12	−4 59	+ 2.5	+0.3	1.25
50	Loch Laxford	58 24	5 08	0 21	Greenock	317	−5 07	−4 54	+ 3.2	+0.4	1.32
	Scotland, north coast.										
51	Cape Wrath	58 38	5 00	0 20	Greenock	317	−4 23	−4 10	+ 3.7	+0.5	1.37
52	Loch Eriboll	58 32	4 39	0 19	Greenock	317	−4 14	−4 01	+ 3.2	+0.4	1.32
53	Loch Tongue	58 31	4 24	0 18	Greenock	317	−4 05	−3 52	+ 3.2	+0.4	1.33
54	Thurso	58 37	3 32	0 14	Greenock	317	−3 34	−3 34	+ 2.1	+0.3	1.21
55	Stroma Island, south side	58 40	3 07	0 12	Greenock	317	−2 16	−2 03	− 2.1	−0.1	0.80
	Ireland, east coast.						*Dublin time, 6° 20′ W.*				
56	Red Bay	55 03	6 03	0 24	Kingstown	321	−0 39	−0 26	− 6.3	−0.8	0.37
57	Maiden Rocks	54 56	5 44	0 23	Kingstown	321	−0 26	−0 13	− 3.6	−0.5	0.64
58	Belfast	54 40	5 49	0 23	Kingstown	321	−0 14	−0 25	− 1.2	−0.3	0.90
59	Donaghadee	54 39	5 32	0 22	Kingstown	321	+0 06	+0 15	+ 0.4	−0.1	1.06
60	Killard Point, Lough Strangford	54 18	5 32	0 22	Kingstown	321	−0 18	−0 05	+ 3.0	+0.1	1.34

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic. (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	10 40	4 28	10 37*a*	4 31*b*	19.6	25.4	12.9	21.3	1.0	1.0	.....	1.4	12.7	10.7	17.5
2	11 05	4 53	11 01*a*	4 57*b*	13.0	16.9	8.6	14.4	0.8	0.8	.....	1.2	8.4	7.2	17.5
3	11 00	4 48	10 57*a*	4 51*b*	21.1	27.4	13.9	22.9	1.0	1.1	.....	1.5	13.7	11.5	17.5
4	11 05	4 53	10 59*a*	4 59*b*	6.6	8.5	4.4	7.6	0.6	0.6	.....	0.8	4.2	3.8	17.5
5	11 55	5 43	11 52*a*	5 46*b*	21.4	27.8	14.1	23.2	1.0	1.1	.....	1.5	13.9	11.6	17.5
6	11 00	4 48	10 57*a*	4 51*b*	19.9	25.9	13.1	21.6	1.0	1.0	.....	1.4	13.0	10.8	18.0
7	10 50	4 38	10 47*a*	4 41*b*	19.8	25.7	13.1	21.5	1.0	1.0	.....	1.4	12.8	10.7	18.0
8	11 10	4 58	11 07*a*	5 01*b*	19.1	24.8	12.6	20.8	1.0	1.0	.....	1.4	12.4	10.5	18.0
9	11 25	5 13	11 22*a*	5 16*b*	19.8	25.7	13.1	21.5	1.0	1.0	.....	1.4	12.8	10.7	18.0
10	0 00	5 48	--0 04*b*	5 52*b*	15.3	19.8	10.1	16.9	0.9	0.9	.....	1.3	9.9	8.4	18.0
11	10 55	4 43	10 51*a*	4 47*b*	15.2	19.7	10.0	16.8	0.9	0.9	.....	1.2	9.8	8.4	18.5
12	11 00	4 48	10 56*a*	4 52*b*	15.8	20.5	10.4	17.4	0.9	0.9	.....	1.3	10.2	8.7	18.5
13	11 00	4 48	10 56*a*	4 52*b*	15.8	20.5	10.4	17.4	0.9	0.9	.....	1.3	10.2	8.7	18.5
14	10 58	4 46	10 54*a*	4 50*b*	15.2	19.7	10.0	16.8	0.9	0.9	.....	1.2	9.8	8.4	18.5
15	10 56	4 44	10 52*a*	4 48*b*	12.4	16.1	8.2	13.8	0.8	0.8	.....	1.1	8.0	6.9	18.5
16	12 15	6 03	12 13*a*	6 06*b*	23.1	28.5	17.2	24.5	1.2	0.8	.....	1.4	14.2	12.2	18.0
17	11 50	5 38	11 46*a*	5 45*b*	4.9	6.0	3.6	5.5	0.6	0.3	.....	0.7	3.0	2.7	18.0
18	11 00	4 48	10 58*a*	4 52*b*	18.6	22.9	13.8	19.9	1.1	0.7	.....	1.3	11.4	9.9	18.5
19	11 20	5 08	11 17*a*	5 13*b*	11.4	14.0	8.4	12.4	0.9	0.5	.....	1.0	7.0	6.1	18.5
20	11 50	5 38	11 47*a*	5 43*b*	9.6	11.8	7.1	10.5	0.8	0.5	.....	0.9	5.9	5.2	18.5
21	11 00	4 48	11 58*a*	4 52*b*	14.5	17.9	10.8	15.6	1.0	0.6	.....	1.1	9.0	7.7	18.5
22	11 05	4 53	11 03*a*	4 58*b*	12.0	14.8	8.9	13.0	0.9	0.5	.....	1.0	7.4	6.4	18.5
23	11 00	4 48	10 57*a*	4 53*b*	11.9	14.7	8.8	12.9	0.9	0.5	.....	1.0	7.4	6.4	19.0
24	11 02	4 50	10 59*a*	4 55*b*	8.9	10.9	6.6	9.8	0.8	0.5	.....	0.9	5.4	4.8	19.0
25	11 35	5 23	11 32*a*	5 28*b*	8.0	9.8	5.9	8.8	0.7	0.4	.....	0.8	4.9	4.3	19.0
26	11 40	5 28	11 36*a*	5 34*b*	7.1	8.7	5.2	7.9	0.7	0.4	.....	0.8	4.4	3.9	19.0
27	11 35	5 23	11 31*a*	5 29*b*	7.2	8.8	5.3	8.0	0.7	0.4	.....	0.8	4.4	3.9	19.0
28	11 44	5 18	11 41*a*	5 23*b*	9.1	11.2	6.8	10.0	0.8	0.5	9 31	0.9	5.6	4.9	19.0
29	0 05	6 18	0 02*b*	6 24*b*	8.2	10.1	6.1	9.0	0.7	0.5	.....	0.9	5.0	4.5	19.0
30	0 35	6 48	0 32*b*	6 54*b*	8.8	10.8	6.5	9.7	0.8	0.5	.....	0.9	5.4	4.8	19.0
31	0 55	7 08	0 52*b*	7 14*b*	9.1	11.2	6.7	10.0	0.8	0.5	.....	0.9	5.6	5.0	19.0
32	11 50	5 38	11 47*a*	5 43*b*	7.9	9.7	5.8	8.7	0.7	0.4	.....	0.8	4.8	4.3	19.5
33	11 30	5 18	11 26*a*	5 25*b*	7.0	8.6	5.2	7.8	0.7	0.4	.....	0.8	4.3	3.8	19.5
34	10 20	4 08	10 15*a*	4 16*b*	3.2	4.0	2.4	3.8	0.5	0.3	.....	0.5	2.0	1.8	19.5
35	4 50	11 03	4 44*b*	11 12*a*	3.9	4.8	2.9	4.5	0.5	0.3	.....	0.6	2.4	2.2	20.0
36	4 35	10 47	4 30*b*	10 55*a*	4.7	5.8	3.5	5.3	0.5	0.3	.....	0.7	2.9	2.6	19.5
37	5 05	11 17	5 01*b*	11 22*a*	8.9	10.9	6.6	9.8	0.8	0.5	.....	0.9	5.4	4.8	20.0
38	5 10	11 22	5 08*b*	11 26*a*	10.4	12.8	7.7	11.3	0.8	0.5	.....	1.0	6.4	5.6	19.5
39	5 20	11 32	5 18*b*	11 36*a*	10.5	12.9	7.8	11.4	0.8	0.5	.....	1.0	6.4	5.6	20.0
40	5 15	11 27	5 12*b*	11 32*a*	9.6	11.8	7.1	10.5	0.8	0.5	.....	0.9	5.9	5.2	20.5
41	5 30	11 42	5 27*b*	11 47*a*	11.0	13.5	8.1	11.9	0.8	0.5	.....	1.1	6.8	5.9	20.0
42	5 35	11 47	5 33*b*	11 51*a*	11.7	14.4	8.7	12.7	0.9	0.5	.....	1.1	7.2	6.2	20.0
43	5 50	12 02	5 48*b*	12 06*a*	12.2	15.0	9.0	13.2	0.9	0.6	.....	1.1	7.5	6.5	20.0
44	6 05	12 17	6 03*b*	12 21*a*	12.6	15.5	9.3	13.6	0.9	0.6	.....	1.2	7.8	6.7	20.0
45	6 20	0 07	6 18*b*	0 11*b*	12.0	14.8	8.9	13.0	0.9	0.6	.....	1.1	7.4	6.4	20.5
46	6 10	12 22	6 08*b*	0 02*b*	12.1	14.9	9.0	13.1	0.9	0.6	.....	1.1	7.4	6.4	20.0
47	6 25	0 12	6 23*b*	0 16*b*	11.7	14.4	8.7	12.7	0.8	0.5	.....	1.1	7.2	6.2	20.0
48	6 27	0 14	6 25*b*	0 18*b*	11.6	14.3	8.6	12.6	0.8	0.5	.....	1.1	7.2	6.2	20.0
49	6 30	0 17	6 28*b*	0 21*b*	11.4	14.0	8.4	12.3	0.8	0.5	.....	1.0	7.0	6.1	20.0
50	6 35	0 22	6 33*b*	0 26*b*	12.0	14.8	8.9	13.0	0.9	0.6	.....	1.1	7.4	6.4	20.0
51	7 20	1 07	7 18*a*	1 11*b*	12.5	15.4	9.3	13.5	0.9	0.6	.....	1.1	7.7	6.6	20.0
52	7 30	1 17	7 28*a*	1 22*b*	12.0	14.7	8.8	12.8	0.8	0.5	.....	1.1	7.4	6.4	19.5
53	7 40	1 27	7 38*a*	1 32*b*	12.1	14.9	9.0	13.1	0.9	0.6	.....	1.1	7.4	6.4	19.5
54	8 15	1 49	8 13*a*	1 53*b*	11.0	13.5	8.1	11.9	0.8	0.5	.....	1.0	6.8	5.9	19.0
55	9 35	3 22	9 31*a*	3 28*b*	7.3	9.0	5.4	8.0	0.6	0.4	.....	0.8	4.5	3.9	19.0
56	10 15	4 03	10 10*a*	4 11*b*	3.2	3.8	2.6	3.8	0.5	0.3	.....	0.5	1.9	1.8	19.5
57	10 30	4 18	10 26*a*	4 25*b*	5.6	6.7	4.5	6.2	0.6	0.3	.....	0.7	3.4	3.0	19.5
58	10 42	4 06	10 38*a*	4 11*b*	7.9	9.3	6.3	8.7	0.7	0.4	.....	0.8	4.7	4.3	19.5
59	11 00	4 48	10 56*a*	4 54*b*	9.3	11.1	7.4	10.2	0.8	0.5	.....	0.9	5.6	5.0	19.0
60	10 40	4 28	10 36*a*	4 32*b*	11.7	13.9	9.4	12.7	0.9	0.5	.....	1.0	7.0	6.3	19.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	EUROPE (WEST COAST)—Cont'd.										
	THE BRITISH ISLANDS—continued.						*Dublin time, 6° 20′ West.*		*Mean Low Water Springs.*		
	Ireland, east coast—Continued.	*North.*	*West.*								
		° ′	° ′	h. m.			h. m.	h. m.	*feet.*	*feet.*	
1	Strangford	54 21	5 34	0 22	Kingstown	319	+1 42	+1 30	−0.3	−0.2	0.99
2	Newcastle, Dundrum Bay	54 11	5 54	0 24	Kingstown	319	−0 08	+0 10	+3.3	+0.4	1.34
3	Cranfield Pt., Carlingford Lough	54 01	6 04	0 24	Kingstown	319	−0 08	+0 06	+4.4	+0.5	1.44
4	Newry, Carlingford Lough	54 09	6 22	0 25	Kingstown	319	+0 38	+0 51	+2.0	+0.3	1.20
5	Dundalk	53 59	6 18	0 25	Kingstown	319	−0 12	+0 01	+3.5	+0.4	1.36
6	Drogheda, Boyne River	53 43	6 15	0 25	Kingstown	319	−0 07	+0 06	+0.6	+0.1	1.06
7	Balbriggan	53 37	6 11	0 25	Kingstown	319	−0 27	−0 14	+1.7	+0.2	1.16
8	Howth	53 24	6 04	0 24	Kingstown	319	+0 02	+0 15	+1.7	+0.2	1.16
9	Dublin, Poolbeg Light	53 20	6 09	0 25	Kingstown	319	+0 08	+0 01	+0.7	+0.1	1.07
10	KINGSTOWN, Dublin Bay	53 18	6 08	0 25	Kingstown	319	0 00	0 00	0.0	0.0	1.00
11	Bray Head	53 11	6 07	0 24	Kingstown	319	−0 23	−0 10	+0.8	+0.1	1.07
12	Wicklow	52 58	6 00	0 24	Kingstown	319	−0 43	−0 30	−1.9	−0.2	0.80
13	Arklow	52 47	6 11	0 25	Kingstown	319	−3 07	−2 54	−6.4	−0.7	0.34
14	Wexford	52 19	6 28	0 26	Kingstown	319	−3 46	−3 33	−5.5	−0.6	0.45
15	Tuskar	52 12	6 18	0 25	Kingstown	319	−5 22	−5 09	−1.9	−0.2	0.80
	Ireland, south coast.										
16	Carnsore	52 09	6 22	0 25	Queenstown	323	+1 04	+0 51	−2.9	−0.3	0.73
17	Coninbeg Rock, Saltee Islands	52 02	6 40	0 27	Queenstown	323	+0 46	+0 33	+0.6	+0.2	1.04
18	Waterford, Duncannon Fort	52 13	6 56	0 28	Queenstown	323	+0 27	+0 14	+0.2	+0.2	1.00
19	Dungarvan Light, Ballinacourty	52 04	7 33	0 30	Queenstown	323	+0 24	+0 11	+0.2	+0.1	1.01
20	Youghal	51 57	7 51	0 31	Queenstown	323	+0 27	+0 14	+0.4	+0.2	1.02
21	Ballycottin	51 50	7 59	0 32	Queenstown	323	+0 06	−0 07	−0.3	+0.1	0.96
22	QUEENSTOWN	51 51	8 18	0 33	Queenstown	323	0 00	0 00	0.0	0.0	1.00
23	Kinsale	51 42	8 30	0 34	Queenstown	323	−0 02	−0 15	−0.7	0.0	0.93
24	Courtmacsherry	51 36	8 40	0 35	Queenstown	323	−0 11	−0 24	−1.3	0.0	0.86
25	Clonakility Bay	51 35	8 52	0 35	Queenstown	323	−0 16	−0 29	−1.2	−0.1	0.88
26	Castletownsend	51 30	9 10	0 37	Queenstown	323	−0 19	−0 32	−1.4	−0.1	0.86
27	Baltimore	51 28	9 24	0 38	Queenstown	323	−0 16	−0 29	−1.9	−0.2	0.82
28	Cape Clear	51 24	9 32	0 38	Queenstown	323	−0 38	−0 51	−3.0	−0.3	0.72
29	Crookhaven	51 29	9 43	0 39	Queenstown	323	−0 30	−0 43	−1.6	−0.2	0.79
	Ireland, west coast.										
30	Dunmanus Harbor	51 30	9 44	0 39	Queenstown	323	−0 47	0 00	−2.5	−0.1	0.74
31	Castletown, Bearhaven	51 37	9 53	0 40	Queenstown	323	−0 26	−0 39	−2.4	0.0	0.75
32	Valentia Harbor	51 56	10 19	0 41	Queenstown	323	−0 55	−1 08	−1.8	+0.1	0.84
33	Castlemaine	52 08	9 43	0 39	Queenstown	323	−0 12	−0 25	+1.7	+0.7	1.12
34	Dingle	52 07	10 16	0 41	Queenstown	323	−0 45	−0 58	−1.4	+0.2	0.83
35	Smerwick Harbor	52 11	10 24	0 42	Queenstown	323	−0 44	−0 57	−0.8	+0.3	0.88
36	Tralee	52 16	9 53	0 40	Queenstown	323	−0 36	−0 49	0.0	+0.4	0.96
37	Carrigaholt, Shannon River	52 35	9 41	0 39	Queenstown	323	+0 03	−0 10	+1.3	+0.5	1.07
38	Tarbert, Shannon River	52 36	9 22	0 37	Queenstown	323	+0 13	0 00	+1.7	+0.7	1.12
39	Limerick, Shannon River	52 39	8 38	0 35	Queenstown	323	+1 29	+1 41	+3.6	+1.3	1.45
40	Liscanor Bay	52 55	9 21	0 37	Queenstown	323	−0 19	−0 32	+1.1	+0.5	1.06
41	Killeany, Arran Islands	53 07	9 38	0 39	Queenstown	323	−0 12	−0 25	+0.9	+0.5	1.04
42	Galway	53 14	9 04	0 36	Queenstown	323	−0 11	−0 37	+2.3	+0.7	1.17
43	Kilkieran Cove	53 17	9 41	0 39	Queenstown	323	−0 07	−0 20	+2.5	+0.8	1.18
44	Slyne Head	53 24	10 14	0 41	Queenstown	323	−0 09	−0 22	+0.8	+0.5	1.03
45	Inishbofin	53 37	10 15	0 41	Queenstown	323	−0 05	−0 18	−0.2	+0.3	0.95
46	Clare Island, Clew Bay	53 50	10 00	0 40	Queenstown	323	−0 01	−0 14	−0.2	+0.3	0.95
47	Westport, Clew Bay	53 47	9 32	0 38	Queenstown	323	+0 12	−0 01	+0.4	+0.5	0.99
48	Broadhaven Harbor	54 13	9 53	0 40	Kingstown	319	+6 39	+6 52	−0.8	+0.4	0.88
49	Killala Bay	54 14	9 12	0 37	Kingstown	319	+6 55	+7 08	−0.9	+0.3	0.86
50	Sligo Harbor, Oyster Island	54 18	8 34	0 34	Kingstown	319	+6 52	+7 05	+0.1	+0.5	0.96
51	Mullaghmore, Sligo Bay	54 27	8 26	0 34	Kingstown	319	+6 47	+7 00	0.0	+0.4	0.94
52	Donegal	54 37	8 07	0 32	Kingstown	319	+6 45	+6 58	+0.1	+0.5	0.96
53	Killybegs	54 35	8 27	0 34	Kingstown	319	+6 45	+6 58	0.0	+0.4	0.94
54	Lough Rossmore	54 47	8 31	0 34	Kingstown	319	+6 49	+7 02	−0.4	+0.4	0.92
	Ireland, north coast.										
55	Ballyness Bar	55 08	8 08	0 33	Kingstown	319	+6 51	+7 04	+0.2	+0.4	0.98
56	Sheephaven	55 11	7 53	0 32	Kingstown	319	+7 00	+7 13	+0.4	+0.4	1.00
57	Mulroy Bay Bar	55 15	7 45	0 31	Kingstown	319	+7 07	+7 20	+0.4	+0.4	0.99
58	Rathmullan, Lough Swilly	55 08	7 30	0 30	Kingstown	319	+7 08	+7 21	+1.0	+0.6	1.06
59	Culdaff Bay	55 18	7 10	0 29	Kingstown	319	+7 17	+7 30	−2.2	+0.2	0.74
60	Moville, Lough Foyle	55 10	7 02	0 28	Kingstown	319	+8 31	+8 44	−3.2	0.0	0.64
61	Londonderry, Lough Foyle	54 59	7 21	0 29	Kingstown	319	+9 25	+9 37	−2.8	0.0	0.68
62	Coleraine	55 09	6 45	0 27	Kingstown	319	+7 47	+8 00	−4.4	−0.2	0.53
63	Port Rush	55 13	6 32	0 26	Kingstown	319	+7 29	+8 07	−5.3	−0.3	0.43
64	Ballycastle Bay	55 12	6 15	0 25	Kingstown	319	+7 43	+8 21	−7.4	−0.6	0.24

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	h. m.	h. m.	h. m.	feet.	feet.	feet.	feet.	feet.	feet.	h. m.	feet.	feet.	feet.	West. °
1	0 15	6 03	0 12b	6 08b	8.7	10.4	7.0	9.6	0.8	0.4	.....	0.9	5.2	4.8	19.0
2	10 50	4 38	10 47a	4 41b	11.7	14.6	8.5	11.3	0.7	0.8	.....	1.1	7.3	5.6	19.0
3	10 45	4 33	10 42a	4 36b	12.6	15.8	9.2	12.2	0.8	0.8	.....	1.1	7.9	6.1	19.0
4	11 30	5 18	11 27a	5 21b	10.5	13.1	7.7	10.1	0.7	0.8	.....	1.0	6.6	5.0	19.5
5	10 40	4 28	10 37a	4 31b	11.9	14.9	8.7	11.5	0.8	0.8	.....	1.1	7.4	5.7	19.5
6	10 45	4 33	10 42a	4 36b	9.8	11.6	6.8	8.9	0.7	0.7	.....	1.0	5.8	4.4	19.5
7	10 25	4 13	10 22a	4 16b	10.2	12.8	7.5	9.8	0.7	0.7	.....	1.0	6.4	4.9	19.0
8	10 55	4 43	10 52a	4 46b	10.2	12.7	7.5	9.8	0.7	0.7	.....	1.0	6.4	4.9	19.0
9	11 00	4 28	10 57a	4 31b	9.4	11.7	6.8	9.0	0.7	0.7	.....	1.0	5.8	4.5	19.0
10	10 52	4 27	10 49a	4 30b	8.8	10.9	6.4	8.4	0.7	0.7	.....	1.0	5.4	4.2	19.0
11	10 30	4 18	10 27a	4 21b	9.4	11.8	6.9	9.0	0.7	0.7	.....	1.0	5.9	4.5	19.0
12	10 10	3 58	10 06a	4 02b	7.0	8.7	5.1	6.7	0.6	0.6	.....	0.9	4.4	3.3	19.0
13	7 45	1 33	7 39a	1 39b	3.0	3.8	2.2	2.8	0.4	0.4	.....	0.6	1.9	1.4	19.0
14	7 05	0 53	7 01a	0 57b	3.9	4.9	2.9	3.7	0.4	0.5	.....	0.6	2.4	1.8	19.0
15	5 30	11 43	5 26a	11 47a	7.0	8.8	5.1	6.7	0.6	0.6	.....	0.9	4.4	3.3	19.0
16	5 45	11 58	5 42a	12 00a	6.9	8.9	4.5	7.1	0.6	0.4	.....	0.7	4.4	3.5	19.0
17	5 25	11 38	5 23a	11 40a	9.9	12.8	6.4	10.2	0.7	0.5	.....	0.8	6.4	5.1	19.0
18	5 05	11 18	5 03a	11 20a	9.5	12.3	6.2	9.8	0.7	0.5	.....	0.8	6.2	4.9	19.0
19	5 00	11 13	4 58a	11 15a	9.6	12.4	6.2	9.9	0.7	0.5	.....	0.8	6.2	5.0	19.5
20	5 02	11 15	5 00a	11 17a	9.7	12.6	6.3	10.0	0.7	0.5	.....	0.8	6.3	5.0	19.5
21	4 40	10 53	4 38a	10 55a	9.1	11.8	5.9	9.4	0.7	0.5	.....	0.8	5.9	4.7	19.5
22	4 33	10 59	4 31a	11 01a	9.5	11.9	6.6	9.6	0.7	0.5	6 48	0.8	6.0	4.8	20.0
23	4 30	10 43	4 28a	10 45a	8.8	11.4	5.7	9.1	0.7	0.5	.....	0.8	5.7	4.5	20.0
24	4 20	10 33	4 18a	10 35a	8.2	10.7	5.3	8.5	0.6	0.4	.....	0.7	5.4	4.2	20.0
25	4 15	10 28	4 13a	10 30a	8.4	10.9	5.5	8.7	0.6	0.4	.....	0.7	5.4	4.3	20.0
26	4 10	10 23	4 08a	10 25a	8.2	10.6	5.3	8.5	0.6	0.4	.....	0.7	5.3	4.2	20.0
27	4 12	10 25	4 10a	10 27a	7.8	10.1	5.1	8.1	0.6	0.4	.....	0.7	5.0	4.0	20.0
28	3 50	10 03	3 48a	10 05a	6.8	8.8	4.4	7.1	0.6	0.4	.....	0.7	4.4	3.6	20.5
29	3 57	10 10	3 55a	10 12a	7.5	9.7	4.9	7.8	0.6	0.4	.....	0.7	4.8	3.9	20.5
30	3 40	9 53	3 39a	9 55a	7.0	9.4	4.1	7.4	0.4	0.7	.....	0.8	4.7	3.8	20.5
31	4 00	10 13	3 59a	10 15a	7.1	9.6	4.1	7.5	0.4	0.7	.....	0.8	4.8	3.9	20.5
32	3 30	9 43	3 29a	9 45a	8.0	10.8	4.6	8.4	0.4	0.8	.....	0.8	5.4	4.3	21.0
33	4 15	10 28	4 14a	10 29a	10.6	14.3	6.2	11.1	0.5	0.9	.....	1.0	7.2	5.6	20.5
34	3 40	9 58	3 39a	9 56a	7.9	10.7	4.6	8.3	0.4	0.8	.....	0.8	5.4	4.3	21.0
35	3 40	9 53	3 39a	9 55a	8.4	11.4	4.9	8.8	0.4	0.8	.....	0.9	5.7	4.5	21.0
36	3 50	10 03	3 49a	10 05a	9.1	12.3	5.3	9.5	0.5	0.8	.....	0.9	6.2	4.9	20.5
37	4 30	10 43	4 29a	10 45a	10.2	13.8	5.9	10.7	0.5	0.9	.....	1.0	6.9	5.4	20.5
38	4 42	10 55	4 41a	10 56a	10.6	14.3	6.2	11.1	0.5	0.9	.....	1.0	7.2	5.6	20.5
39	6 00	0 13	5 59a	0 14b	13.8	18.7	8.0	14.3	0.6	1.0	.....	1.1	9.4	7.3	20.5
40	4 10	10 23	4 09a	10 25a	10.1	13.7	5.9	10.6	0.5	0.9	.....	1.0	6.8	5.4	20.5
41	4 15	10 28	4 14a	10 30a	9.9	13.4	5.7	10.4	0.5	0.9	.....	1.0	6.7	5.2	21.0
42	4 19	10 19	4 18a	10 20a	11.1	15.1	6.4	11.6	0.5	0.9	.....	1.0	7.5	5.9	21.0
43	4 20	10 33	4 19a	10 34a	11.2	15.1	6.5	11.7	0.5	0.9	.....	1.0	7.6	5.8	21.0
44	4 16	10 29	4 15a	10 30a	9.8	13.2	5.7	10.3	0.5	0.8	.....	0.9	6.6	5.1	21.0
45	4 20	10 33	4 19a	10 35a	9.0	12.1	5.2	9.4	0.5	0.8	.....	0.9	6.0	4.7	21.5
46	4 25	10 38	4 24a	10 40a	9.0	12.2	5.2	9.4	0.5	0.8	.....	0.9	6.1	4.7	21.5
47	4 40	10 53	4 39a	10 55a	9.4	12.7	5.5	9.8	0.5	0.8	.....	0.9	6.4	4.9	21.0
48	4 50	11 03	4 49a	11 05a	7.7	10.4	4.5	8.1	0.4	0.8	.....	0.8	5.2	4.0	21.5
49	5 10	11 23	5 09a	11 25a	7.6	10.2	4.4	7.9	0.4	0.8	.....	0.8	5.1	4.0	21.0
50	5 10	11 23	5 09a	11 25a	8.4	11.4	4.9	8.8	0.4	0.8	.....	0.9	5.7	4.4	20.5
51	5 05	11 18	5 04a	11 20a	8.3	11.2	4.8	8.7	0.4	0.8	.....	0.9	5.6	4.4	20.5
52	5 05	11 18	5 04a	11 20a	8.4	11.4	4.9	8.8	0.4	0.8	.....	0.9	5.7	4.4	20.5
53	5 03	11 16	5 02a	11 18a	8.3	11.2	4.8	8.7	0.4	0.8	.....	0.9	5.6	4.4	21.0
54	5 07	11 20	5 06a	11 22a	8.1	10.9	4.7	8.5	0.4	0.8	.....	0.8	5.4	4.2	21.0
55	5 10	11 23	5 09a	11 25a	8.6	11.4	5.3	9.0	0.4	0.8	.....	0.9	5.7	4.5	21.0
56	5 20	11 33	5 19a	11 35a	8.8	11.7	5.4	9.2	0.4	0.8	.....	0.9	5.8	4.6	20.5
57	5 28	11 41	5 27a	11 43a	8.7	11.6	5.3	9.1	0.4	0.8	.....	0.9	5.8	4.5	20.5
58	5 30	11 43	5 29a	11 45a	9.3	12.4	5.7	9.7	0.5	0.9	.....	1.0	6.2	4.8	20.5
59	5 40	11 53	5 39a	11 55a	6.5	8.7	4.0	6.9	0.3	0.7	.....	0.8	4.4	3.5	20.5
60	6 55	0 43	6 54a	0 45b	5.6	7.5	3.4	6.0	0.3	0.7	.....	0.8	3.8	3.0	20.0
61	7 48	1 35	7 47a	1 37b	6.0	8.0	3.6	6.4	0.3	0.7	.....	0.8	4.0	3.2	20.5
62	6 12	0 00	6 11a	0 02b	4.7	6.2	2.9	5.1	0.3	0.7	.....	0.8	3.1	2.6	20.0
63	5 55	0 08	5 54a	0 10b	3.8	5.1	2.3	4.2	0.3	0.7	.....	0.8	2.6	2.1	20.0
64	6 10	0 23	6 09a	0 25b	2.1	2.8	1.3	2.5	0.2	0.6	.....	0.7	1.4	1.3	20.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	EUROPE (WEST COAST)—Cont'd.										
	THE BRITISH ISLANDS—continued.										
	Hebrides, or Western Isles.	*North.*	*West.*				*Local time.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	St. Kilda Island	57 48	8 35	0 34	Kingstown	321	+6 53	+7 05	+0.8	+0.6	1.02
2	Barra Head, Bernera Island	56 47	7 39	0 31	Kingstown	321	+7 08	+7 20	−0.1	+0.5	0.93
3	Loch Skiport, S. Uist	57 20	7 08	0 29	Kingstown	321	+7 15	+7 27	+1.0	+0.6	1.08
4	Loch Boisdale, S. Uist	57 09	7 10	0 29	Kingstown	321	+7 08	+7 20	+1.3	+0.7	1.07
5	Loch Maddy, N. Uist	57 36	7 06	0 28	Kingstown	321	+7 28	+7 40	+1.2	+0.6	1.06
6	Monach Island Light	57 32	7 42	0 31	Kingstown	321	+7 07	+7 19	+0.8	+0.6	1.02
7	East Loch Tarbert, Harris Id	57 51	6 45	0 27	Kingstown	321	+7 29	+7 41	+2.0	+0.8	1.14
8	West Loch Tarbert, Harris Id	57 55	6 55	0 28	Kingstown	321	+7 23	+7 35	+0.4	+0.4	0.99
9	Stornoway, Lewis Island	58 11	6 22	0 25	Kingstown	321	+8 08	+8 20	+1.8	+0.8	1.12
10	Bernera, Loch Roag, Lewis Id	58 14	6 50	0 27	Kingstown	321	+7 33	+7 45	−0.2	+0.4	0.92
	Orkney Islands.										
11	Stromness, Mainland, or Pomona I.	58 58	3 31	0 14	Kingstown	321	−2 02	−1 50	−1.2	+0.4	0.83
12	Kirkwall, Mainland, or Pomona I.	58 59	2 58	0 12	Kingstown	321	−0 55	−0 43	−1.2	+0.2	0.83
13	Otterswick, Sanday Island	59 16	2 38	0 10	Kingstown	321	−1 50	−1 38	−0.2	+0.4	0.92
	Shetland Islands.										
14	Scaddon, Fair Isle	59 31	1 39	0 07	Kingstown	321	−0 03	+0 09	−5.4	−0.4	0.42
15	Sumburgh Head, Mainland Id	59 51	1 16	0 05	Kingstown	321	−1 18	−1 05	−5.4	−0.3	0.43
16	Lerwick, Mainland Island	60 09	1 10	0 05	Kingstown	321	−0 33	−0 11	−4.6	−0.2	0.50
17	Balta, Unst Island	60 45	0 50	0 03	Kingstown	321	−1 23	−1 11	−4.2	−0.2	0.58
	FAROE ISLANDS.										
18	Fuglöe Fiord	62 19	6 16	0 25	Hamburg	329	+6 11	+4 53	−0.7	+0.7	0.77
19	Leervigo Fiord	62 15	6 43	0 27	Hamburg	329	+7 51	+6 33	−0.7	+0.8	0.76
20	Myggenaes Fiord	62 08	7 28	0 30	Hamburg	329	+8 56	+2 38	+1.7	+1.1	1.10
21	Suderöe Fiord	61 42	7 00	0 28	Hamburg	329	+0 56	−0 22	−2.8	+0.5	0.47
	BELGIUM.		*East.*				*Greenwich time.*				
22	Nieuport	51 09	2 43	0 11	Dover	309	+1 21	+0 20	−2.7	+0.1	0.81
23	Ostende	51 14	2 56	0 12	Dover	309	+1 17	+0 30	−2.4	+0.2	0.83
24	Blankenberghe	51 19	3 07	0 12	Dover	309	+1 15	+0 14	−5.6	−0.2	0.65
25	Antwerp, Scheldt River	51 14	4 24	0 18	Dover	309	+5 19	+4 18	−3.5	+0.1	0.76
26	Liefkenshoek, Scheldt River	51 18	4 17	0 17	Dover	309	+4 20	+3 19	−2.1	+0.3	0.84
	NETHERLANDS, OR HOLLAND.						*Amsterdam time, 4° 53′ East.*				
27	Vlissingen or Flushing, Schelde R.	51 26	3 34	0 14	Hamburg	329	−4 12	−5 09	+7.4	+1.1	2.02
28	Ter Neuzen, Schelde R.	51 21	3 50	0 15	Hamburg	329	−3 45	−4 44	+8.1	+1.0	2.15
29	Hansweert, Schelde R.	51 26	4 00	0 16	Hamburg	329	−2 57	−4 06	+8.8	+0.9	2.27
30	Wemeldinge	51 31	3 59	0 16	Hamburg	329	−2 28	−4 14	+5.4	+0.6	1.77
31	Zierikzee	51 38	3 54	0 16	Hamburg	329	−2 52	−4 34	+3.9	+0.6	1.53
32	Brouwershaven	51 43	3 55	0 16	Hamburg	329	−3 13	−4 51	+2.4	+0.5	1.31
33	Hellevoetsluis	51 49	4 08	0 17	Hamburg	329	−2 29	−2 53	+0.2	+0.3	0.98
34	Willemstad	51 42	4 26	0 18	Hamburg	329	−1 33	−1 51	+1.0	+0.2	1.13
35	Dordrecht, Oude-Maas R	51 48	4 40	0 19	Hamburg	329	−0 10	+0 03	−0.2	+0.2	0.94
36	Gorinchem, Rhine R.	51 50	5 00	0 20	Hamburg	329	+0 34	+1 49	−3.0	+0.1	0.50
37	Rotterdam, Nieuwe-Maas R	51 55	4 29	0 18	Hamburg	329	−1 14	− 1 02	−1.1	+0.1	0.81
38	Hoek van Holland	51 59	4 08	0 17	Hamburg	329	−3 12	− 3 33	−0.4	+0.3	0.89
39	Ymuiden	52 28	4 34	0 18	Hamburg	329	−2 22	− 1 54	−0.3	+0.4	0.89
40	Helder	52 58	4 46	0 19	Hamburg	329	+0 14	+ 0 22	−2.2	+0.2	0.61
41	Vlieland	53 18	4 04	0 20	Hamburg	329	+3 13	+ 2 01	−0.5	+0.3	0.87
42	Harlingen, Zuider Zee	53 11	5 24	0 22	Hamburg	329	+3 50	+ 3 24	−1.8	+0.2	0.68
43	Durgerdam, Zuider Zee	52 23	4 59	0 20	Hamburg	329	−4 38	− 5 49	−5.1	0.0	0.18
44	West Terschelling Light	53 21	5 13	0 21	Hamburg	329	+3 14	+ 1 59	−1.4	+0.2	0.74
45	Ameland Island Light	53 27	5 37	0 22	Hamburg	329	+3 53	+ 2 38	−1.2	+0.2	0.77
46	Schiermonnikoog Island Light	53 29	6 09	0 25	Hamburg	329	+4 10	+ 2 55	−1.6	+0.2	0.71
47	Delfzyl, Ems River	53 20	6 56	0 28	Hamburg	329	+5 56	+ 4 54	+3.7	+0.5	1.52
	GERMANY.										
	North Sea.						*Time meridian, 15° East.*				
48	Emden, Ems River	53 21	7 11	0 29	Hamburg	329	−4 01	−5 19	+1.6	+0.3	1.13
49	Borkum Island, Ems River Entr	53 35	6 40	0 27	Hamburg	329	−6 28	−7 45	−0.2	+0.6	0.87
50	Norderney Light	53 43	7 13	0 29	Hamburg	329	−5 45	−7 02	+0.2	+0.6	0.94
51	Wangeroog Island, Jade R. Entr	53 47	7 54	0 32	Hamburg	329	−5 26	−6 43	+0.9	+0.3	1.02

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*West.* °
1	5 20	11 32	5 19*a*	11 34*a*	9.0	12.2	5.2	9.4	0.5	0.9	.....	1.0	6.1	4.7	22.0
2	5 35	11 47	5 34*a*	11 49*a*	8.2	11.1	4.8	8.6	0.4	0.8	.....	0.9	5.6	4.3	21.0
3	5 42	11 54	5 41*a*	11 56*a*	9.1	12.3	5.3	9.5	0.5	0.9	.....	1.0	6.2	4.8	21.0
4	5 35	11 47	5 34*a*	11 49*a*	9.4	12.7	5.5	9.8	0.5	0.9	.....	1.0	6.4	4.9	21.0
5	5 55	12 07	5 54*a*	12 09*a*	9.3	12.5	5.4	9.7	0.5	0.9	.....	1.0	6.3	4.8	21.0
6	5 34	11 46	5 33*a*	11 48*a*	9.0	12.2	5.2	9.4	0.5	0.9	.....	1.0	6.1	4.7	21.0
7	5 56	12 08	5 55*a*	12 10*a*	10.0	13.5	5.8	10.4	0.5	0.9	.....	1.0	6.8	5.2	21.0
8	5 50	12 02	5 49*a*	12 04*a*	8.7	11.7	5.0	9.1	0.4	0.8	.....	0.9	5.8	4.5	21.0
9	6 35	0 22	6 34*a*	0 22*b*	9.9	13.4	5.7	10.3	0.5	0.9	.....	1.0	6.7	5.1	21.0
10	6 00	12 12	5 59*a*	12 14*a*	8.1	11.0	4.7	8.5	0.4	0.8	.....	0.9	5.5	4.2	21.0
11	8 50	2 37	8 49*a*	2 39*b*	7.3	9.9	4.2	7.7	0.3	0.7	.....	0.8	5.0	3.8	19.0
12	9 57	3 44	9 56*a*	3 46*b*	7.3	9.8	4.2	7.7	0.3	0.7	.....	0.8	4.9	3.8	19.0
13	9 03	2 50	9 02*a*	2 52*b*	8.1	11.0	4.7	8.5	0.4	0.8	.....	0.9	5.5	4.3	18.5
14	10 50	4 37	10 49*a*	4 39*b*	3.7	5.0	2.2	4.1	0.2	0.6	.....	0.7	2.5	2.1	18.0
15	9 35	3 22	9 34*a*	3 24*b*	3.8	5.2	2.2	4.2	0.2	0.6	.....	0.7	2.6	2.1	18.0
16	10 20	4 17	10 19*a*	4 19*b*	4.4	6.0	2.6	4.8	0.3	0.7	.....	0.8	3.0	2.4	18.0
17	9 30	3 17	9 29*a*	3 19*b*	4.7	6.4	2.7	5.1	0.3	0.7	.....	0.8	3.2	2.6	18.0
18	11 05	4 52	11 04*a*	4 54*b*	4.8	6.5	2.8	5.2	0.3	0.7	.....	0.8	3.2	2.7	22.0
19	0 20	6 32	0 19*b*	6 34*b*	4.7	6.4	2.7	5.1	0.3	0.7	.....	0.8	3.2	2.6	22.5
20	8 50	2 37	8 49*a*	2 39*b*	6.8	9.3	3.9	7.2	0.3	0.7	.....	0.8	4.6	3.5	22.5
21	5 50	12 02	5 48*a*	12 04*a*	2.9	4.0	1.7	3.3	0.2	0.6	.....	0.7	2.0	3.7	22.0
22	0 10	6 22	0 15*b*	6 21*b*	12.3	15.7	8.4	13.5	0.3	0.9	.....	1.0	7.8	6.9	14.0
23	0 07	6 33	0 12*b*	6 32*b*	12.6	16.1	8.5	13.8	0.3	1.0	5 43	1.0	8.0	7.1	14.0
24	0 05	6 17	0 11*b*	6 15*b*	9.8	12.5	6.7	10.9	0.3	0.8	.....	1.0	6.2	5.6	14.0
25	4 15	10 27	4 21*b*	10 26*b*	11.5	14.8	7.8	12.6	0.3	0.8	.....	1.0	7.4	6.4	13.5
26	3 15	9 27	3 20*b*	9 26*b*	12.7	16.3	8.6	13.9	0.3	0.9	.....	1.0	8.2	7.1	13.5
27	0 57	7 30	1 49*b*	8 24*a*	12.5	14.8	9.7	13.2	0.6	0.8	.....	1.0	7.4	6.7	13.5
28	1 25	7 56	2 22*b*	8 43*a*	13.3	15.5	10.8	14.1	0.6	0.8	.....	1.0	7.7	7.5	13.5
29	2 14	8 35	3 10*b*	9 28*a*	14.1	16.1	12.7	14.9	0.7	0.8	.....	1.1	8.0	7.9	13.5
30	2 43	8 27	3 35*b*	9 11*a*	11.0	12.4	9.3	12.0	1.1	1.0	.....	1.4	6.2	6.0	13.5
31	2 19	8 07	3 10*b*	8 46*a*	9.5	10.8	8.1	10.5	1.0	0.9	.....	1.4	5.4	5.2	13.5
32	1 58	7 50	2 40*b*	8 26*a*	8.1	9.2	6.8	9.0	1.0	0.8	.....	1.3	4.6	4.4	13.5
33	2 43	9 49	3 36*b*	10 42*a*	6.1	6.8	5.4	6.9	1.0	0.5	.....	1.1	3.4	3.3	13.5
34	3 40	10 52	4 35*b*	12 08*a*	7.0	7.7	6.2	7.7	1.0	0.5	.....	1.1	3.8	3.8	13.5
35	5 04	0 22	6 01*b*	1 08*b*	5.8	6.2	5.4	6.4	0.8	0.5	.....	0.9	3.2	3.1	13.0
36	5 49	2 09	6 37*b*	2 52*b*	3.1	3.4	2.7	3.6	0.8	0.3	.....	0.8	1.7	1.7	13.0
37	3 59	11 41	5 00*b*	12 33*a*	5.0	5.4	4.6	5.7	1.0	0.4	.....	1.1	2.7	2.7	13.5
38	2 00	9 09	2 44*b*	10 42*a*	5.5	6.2	4.7	6.2	1.0	0.4	18 01	1.1	3.1	3.0	13.5
39	2 51	10 49	3 33*b*	11 28*a*	5.5	6.4	4.5	6.1	0.8	0.3	18 17	0.9	3.2	2.9	13.5
40	5 28	0 41	7 01*b*	1 32*a*	3.8	4.3	2.7	4.5	0.9	0.5	18 53	1.0	2.2	2.1	13.5
41	8 28	2 21	9 20*b*	3 23*a*	5.4	6.2	4.4	6.1	0.7	0.7	.....	1.0	3.1	3.0	13.5
42	9 07	3 46	9 56*b*	4 54*a*	4.2	4.8	3.5	4.6	0.7	0.3	.....	0.7	2.4	2.3	13.0
43	0 37	6 56	1 06*b*	7 52*a*	1.1	1.2	0.9	1.4	0.3	0.4	.....	0.5	0.6	0.7	13.0
44	8 30	2 20	9 52*b*	3 15*a*	4.6	5.2	3.9	5.3	0.8	0.6	.....	1.0	2.6	2.5	13.0
45	9 10	3 00	10 30*b*	3 55*a*	4.8	5.4	4.1	5.5	0.9	0.5	.....	1.1	2.7	2.6	13.0
46	9 30	3 20	10 50*b*	4 15*a*	4.4	5.0	3.7	5.1	0.7	0.4	.....	1.1	2.5	2.4	13.0
47	11 19	5 22	12 10*b*	6 12*a*	9.4	10.7	8.0	10.3	0.7	1.0	.....	1.2	5.3	5.2	12.5
48	0 24	6 36	0 19*a*	6 44*a*	7.0	8.9	5.0	7.3	0.9	0.5	.....	1.0	4.4	3.6	12.0
49	10 20	4 08	10 14*b*	4 17*a*	5.4	6.8	3.8	5.7	0.7	0.5	.....	0.9	3.4	2.8	12.5
50	11 05	4 53	10 59*b*	5 02*a*	5.8	7.3	4.1	6.1	0.8	0.5	.....	0.9	3.6	3.0	12.0
51	11 27	5 15	11 21*b*	5 24*a*	6.3	8.0	4.5	6.6	0.8	0.5	.....	1.0	4.0	3.2	12.0

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	EUROPE (WEST COAST)—Cont'd.										
	GERMANY—continued.										
	North Sea—Continued.	*North.*	*East.*				*Time meridian, 15° East.*		*Mean Low Water Springs.*		
		° ′	° ′	h. m.			h. m.	h. m.	feet.	feet.	
1	Hooksiel, Jade River	53 38	8 02	0 32	Hamburg	329	− 5 03	− 6 20	+3.4	+1.1	1.37
2	Wilhelmshaven, Jade River	53 31	8 09	0 33	Hamburg	329	− 4 26	− 5 45	+6.2	+1.3	1.79
3	Red Sand Light	53 51	8 05	0 32	Hamburg	329	− 5 27	− 6 20	+3.8	+1.0	1.45
4	Hohe Weg Light, Weser River	53 43	8 15	0 33	Hamburg	329	− 4 04	− 5 21	+4.5	+1.1	1.55
5	Bremerhaven, Weser River	53 33	8 34	0 34	Hamburg	329	− 3 56	− 4 49	+5.6	+1.2	1.71
6	Braake, Weser River	53 20	8 29	0 34	Hamburg	329	− 1 50	− 3 07	+4.7	+1.1	1.58
7	Elsfleth, Weser River	53 14	8 28	0 34	Hamburg	329	− 1 30	− 2 47	+2.9	+0.2	1.32
8	Vegesack, Weser River	53 11	8 37	0 34	Hamburg	329	− 0 50	− 2 07	−0.8	+0.5	0.79
9	Helgoland Island	54 11	7 53	0 32	Hamburg	329	− 5 29	− 6 22	+1.0	+0.4	1.10
10	Elbe R. E., outer light vessel No. 1	54 00	8 15	0 33	Hamburg	329	− 4 24	− 5 41	+2.0	+0.8	1.19
11	Cuxhaven, Elbe River	53 52	8 42	0 35	Hamburg	329	− 3 52	− 5 10	+2.8	+0.9	1.31
12	Brunsbüttel, Elbe River	53 53	9 06	0 36	Hamburg	329	− 2 49	− 4 07	+2.3	+0.9	1.23
13	Glückstadt, Elbe River	53 47	9 24	0 38	Hamburg	329	− 1 52	− 3 10	+2.7	+0.9	1.29
14	Brunshausen, Elbe River	53 37	9 31	0 38	Hamburg	329	− 0 53	− 2 11	+1.8	+0.8	1.16
15	Lühe, Elbe River	53 35	9 38	0 39	Hamburg	329	− 0 35	− 1 52	+1.3	+0.7	1.10
16	HAMBURG, Elbe River	53 33	9 59	0 40	Hamburg	329	0 00	0 00	0.0	0.0	1.00
17	Büsum	54 08	8 52	0 35	Hamburg	329	− 3 20	− 4 37	+4.2	+1.0	1.52
18	Eider River Entr., light vessel	54 16	8 19	0 33	Hamburg	329	− 5 04	− 6 21	+2.4	+0.9	1.24
19	Tönning, Eider River	54 19	8 57	0 36	Hamburg	329	− 2 47	− 4 05	+3.7	+1.0	1.44
20	Husum	54 29	9 01	0 36	Hamburg	329	− 2 22	− 3 39	+3.4	+1.0	1.39
21	Pellworm Island	54 31	8 41	0 35	Hamburg	329	− 2 51	− 4 09	+2.4	+0.8	1.26
22	Wyk, Föhr Island	54 41	8 34	0 34	Hamburg	329	− 2 55	− 4 13	+0.7	+0.7	1.00
23	Amrum Island	54 38	8 23	0 34	Hamburg	329	− 4 00	− 6 18	+1.6	+0.8	1.13
24	Lister-deep, Fairway buoy	55 05	8 27	0 34	Cape Town	273	− 0 47	− 0 45	−0.6	0.0	1.24
	DENMARK.										
	North Sea.										
25	Sönderho, Fanö Island	55 20	8 28	0 34	Cape Town	273	+ 1 05	+ 1 06	+0.6	0.0	1.24
26	Nordby	55 27	8 25	0 34	Cape Town	273	+ 1 27	+ 1 27	+0.2	0.0	1.12
27	Hjerting	55 31	8 21	0 33	Cape Town	273	+ 1 29	+ 1 30	0.0	−0.2	1.06
28	Blaavand Point	55 33	8 05	0 32	Cape Town	273	+ 0 25	+ 0 26	+0.4	0.0	1.18
29	Horn Reefs	55 34	7 19	0 29	Cape Town	273	− 1 37	− 1 35	+0.2	0.0	1.12
30	Nymindegab	55 48	8 11	0 33	Apia	221	− 3 47	− 3 47	−1.0	−0.2	0.65
31	Thybö Rön	56 43	8 14	0 33	Apia	221	− 2 22	− 2 22	−1.3	−0.1	0.54
32	Hirtshals	57 35	9 57	0 40	Apia	221	− 2 11	− 2 11	−1.8	−0.2	0.38
33	Skagen or the Skaw	57 44	10 38	0 43	Galveston	129	−12 08	−10 55	−0.4	+0.2	1.01
34	Copenhagen, Baltic Sea	55 42	12 36	0 50	Galveston	129	+ 4 33	+ 5 16	−0.8	+0.2	0.73
	NORWAY.										
35	Frederickstad	59 18	10 57	0 44	Astoria	161	− 7 31	− 8 20	−6.1	−1.2	0.28
36	Oscarsborg	59 40	10 37	0 42	Astoria	161	− 7 01	− 8 11	−6.7	−1.4	0.17
37	Christiania	59 55	10 44	0 43	Astoria	161	− 7 34	− 8 14	−6.7	−1.3	0.16
38	Frederiksvaern	59 01	10 05	0 40	Astoria	161	− 7 53	− 8 54	−6.7	−1.4	0.17
39	Oster-Risöer	58 43	9 15	0 37	Astoria	161	− 8 22	− 9 17	−6.7	−1.3	0.16
40	Arendal	58 27	8 46	0 35	Astoria	161	− 9 06	− 9 29	−6.9	−1.3	0.13
41	Christiansand	58 08	8 00	0 32	Cape Town	273	+ 3 11	+ 2 59	−3.0	−0.4	0.24
42	Tananger	58 55	5 34	0 22	Cape Town	273	− 3 43	− 3 40	−2.6	−0.4	0.35
43	Stavanger	58 59	5 44	0 23	Cape Town	273	− 3 43	− 3 43	−2.4	−0.2	0.41
44	Skudesnaes	59 08	5 18	0 21	Cape Town	273	− 3 05	− 3 04	−2.2	−0.4	0.47
45	Bergen	60 24	5 18	0 21	Cape Town	273	− 3 02	− 3 09	−0.4	−0.2	0.94
46	Romsdals Islands	62 45	6 00	0 24	Hamburg	329	+ 6 16	+ 4 59	−1.3	+0.6	0.69
47	Christiansund	63 08	8 00	0 32	Hamburg	329	+ 6 32	+ 5 15	−1.0	+0.6	0.74
48	Trondhjem or Munkholm	63 27	10 24	0 42	Hamburg	329	+ 6 40	+ 5 21	+1.1	+0.9	1.03
49	Traen Islands	66 31	12 02	0 48	Hamburg	329	+ 6 51	+ 5 34	−0.3	+0.7	0.84
50	Vaero, Lofoten Islands	67 38	12 37	0 50	Hamburg	329	+ 7 04	+ 5 46	+1.5	+1.0	1.08
51	Andenaes, Lofoten Islands	69 12	16 11	1 05	Hamburg	329	− 4 20	− 5 37	0.0	+0.6	0.90
52	Tromsöe	69 40	19 00	1 16	Hamburg	329	− 3 38	− 4 55	+0.7	+0.7	1.00
53	Hammerfest	70 40	23 40	1 35	Hamburg	329	− 3 13	− 4 23	+1.2	+0.8	1.06
54	Vardöe	70 20	31 06	2 04	Hamburg	329	− 0 25	− 1 36	+1.8	+0.8	1.16
	RUSSIA.						*Local time.*				
55	Petshenga Bay	69 38	31 24	2 06	Hamburg	329	+ 1 44	+ 0 41	+0.2	+0.6	0.94
56	Kola	68 49	33 00	2 12	Hamburg	329	+ 2 05	+ 1 01	−0.2	+0.6	0.87
57	Teriberskoi Bay	69 07	35 09	2 21	Hamburg	329	+ 2 11	+ 0 56	+5.1	+1.2	1.63
58	Sem or Seven Islands	68 49	37 22	2 29	Hamburg	329	+ 3 10	+ 1 55	+4.1	+1.1	1.48
59	Sviatoi Noss	68 09	39 49	2 39	Hamburg	329	+ 4 05	+ 2 50	+6.3	+1.4	1.79

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
															West.
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	°
1	11 50	5 38	11 45*b*	5 45*a*	8.5	10.7	6.0	8.8	0.9	0.6	.....	1.1	5.4	4.3	12.0
2	0 03	6 14	0 00*a*	6 19*a*	11.1	13.8	8.0	11.1	0.9	0.5	22 36	1.1	6.9	5.5	12.0
3	11 26	5 38	11 23*b*	5 43*a*	9.0	11.2	6.5	9.0	0.9	0.6	.....	1.1	5.6	4.5	12.0
4	0 25	6 38	0 19*a*	6 47*a*	9.6	11.9	6 9	9.8	0.9	0.6	.....	1.1	6.0	4.9	11.5
5	0 32	7 11	0 29*a*	7 16*a*	10.6	13.1	7.6	11.0	0.9	0.6	.....	1.1	6.6	5.5	11.5
6	2 40	8 53	2 36*a*	9 00*a*	9.8	12.2	7.1	10.2	0.9	0.5	.....	1.0	6.1	5.1	11.5
7	3 00	9 13	2 56*a*	9 21*a*	8.2	10.2	5.9	8.6	0.8	0.4	.....	0.9	5.1	4.3	11.5
8	3 40	9 53	3 35*a*	10 02*a*	4.9	6.1	3.5	5.2	0.6	0.3	.....	0.7	3.0	2.6	11.5
9	11 24	5 36	11 21*b*	5 43*a*	6.8	7.7	5.6	7.3	0.9	0.5	21 51	0.9	3.9	3.6	12.0
10	0 05	6 18	0 01*a*	6 25*a*	7.4	9.2	5.8	8.1	0.9	0.5	.....	1.0	4.6	4.0	12.0
11	0 39	6 51	0 36*a*	6 57*a*	8.1	10.1	5.8	8.8	0.9	0.5	.....	1.0	5.0	4.3	11.5
12	1 48	7 55	1 39*a*	8 02*a*	7.6	9.5	5.5	8.3	0.9	0.5	.....	1.0	4.8	4.1	11.5
13	2 42	8 54	2 39*a*	9 00*a*	8.0	10.0	5.8	8.7	0.9	0.5	.....	1.0	5.0	4.3	11.0
14	3 41	9 53	3 37*a*	10 00*a*	7.2	9.0	5.2	7.9	0.9	0.5	.....	1.0	4.5	3.9	11.0
15	4 00	10 13	3 56*a*	10 20*a*	6.8	8.5	4.9	7.5	0.8	0.5	.....	0.9	4.2	3.7	11.0
16	4 36	12 06	4 38*a*	12 18*a*	6.2	6.5	5.7	6.5	1.2	0.2	5 28	1.2	3.2	3.0	11.0
17	1 11	7 24	1 08*a*	7 30*a*	9.4	11.7	6.8	10.2	1.0	0.5	.....	1.1	5.8	5.0	11.5
18	11 50	5 38	11 46*b*	5 45*a*	7.7	9.6	5.5	8.4	0.9	0.5	.....	1.0	4.8	4.1	11.5
19	1 45	7 57	1 42*a*	8 03*a*	8.9	11.0	6.4	9.7	1.0	0.5	.....	1.1	5.5	4.7	11.5
20	2 10	8 23	2 06*a*	8 30*a*	8.6	10.8	6.2	9.3	0.9	0.5	.....	1.1	5.4	4.6	11.5
21	1 40	7 52	1 36*a*	7 59*a*	7.8	9.7	5.6	8.5	0.9	0.5	.....	1.0	4.8	4.2	11.5
22	1 35	7 47	1 31*a*	7 55*a*	6.2	7.8	4.5	6.8	0.8	0.4	.....	0.9	3.9	3.3	11.5
23	0 30	6 42	0 26*a*	6 49*a*	7.0	8.8	5.0	7.7	0.9	0.5	.....	1.0	4.4	3.8	11.5
24	0 20	6 33	0 15*a*	6 42*a*	4.2	5.2	3.0	4.7	0.7	0.3	.....	0.7	2.6	2.3	12.0
25	2 12	8 24	2 07*a*	8 33*a*	4.2	5.3	3.0	4.7	0.7	0.3	.....	0.7	2.6	2.3	12.0
26	2 34	8 46	2 29*a*	8 55*a*	3.8	4.7	2.7	4.3	0.6	0.3	.....	0.7	2.4	2.1	12.0
27	2 35	8 47	2 30*a*	8 57*a*	3.6	4.5	2.6	4.1	0.6	0.3	.....	0.7	2.2	2.0	12.0
28	1 30	7 42	1 25*a*	7 51*a*	4.0	5.0	2.9	4.5	0.6	0.3	.....	0.7	2.5	2.2	12.0
29	11 50	5 38	11 45*b*	5 47*a*	3.8	4.8	2.7	4.3	0.6	0.3	.....	0.7	2.4	2.1	12.5
30	2 35	8 47	2 27*a*	9 02*a*	1.7	2.1	1.2	1.9	0.2	0.1	.....	0.5	1.0	0.9	12.0
31	4 00	10 12	3 52*a*	10 27*a*	1.4	1.8	1.0	1.6	0.2	0.1	.....	0.4	0.9	0.8	12.0
32	4 18	10 30	4 07*a*	10 51*a*	1.0	1.2	0.7	1.1	0.1	0.0	.....	0.4	0.6	0.5	11.0
33	[5 46]	[11 58]	7 01*a*	11 16*a*	[0.8]	[1.0]	[0.5]	1.5	.....	.....	.....	1.2	0.5	0.8	10.5
34	[9 33]	[3 21]	11 06*b*	2 30*b*	[0.5]	[0.6]	[0.3]	1.1	.....	.....	1 06	0.9	0.3	0.6	9.5
35	5 02	10 30	5 19*a*	9 59*a*	1.5	1.8	1.4	2.5	0.7	0.9	.....	1.0	0.9	1.0	10.5
36	4 28	10 41	5 45*a*	10 04*a*	1.1	1.3	1.0	1.9	0.6	0.7	.....	0.9	0.6	0.7	10.5
37	4 50	10 37	5 45*a*	9 54*a*	1.0	1.2	0.9	1.8	0.6	0.7	.....	0.9	0.6	0.7	10.5
38	4 34	10 00	4 56*a*	9 18*a*	1.1	1.3	1.0	1.9	0.6	0.7	.....	1.0	0.6	0.8	11.0
39	4 08	9 40	4 31*a*	8 59*a*	1.0	1.2	0.9	1.8	0.6	0.7	.....	0.9	0.6	0.7	11.5
40	3 26	9 30	4 43*a*	9 22*a*	0.8	1.0	0.7	1.5	0.5	0.6	.....	0.8	0.5	0.6	12.0
41	4 16	10 15	4 11*a*	10 31*a*	0.8	1.1	0.5	1.2	0.2	0.1	.....	0.2	0.6	0.6	12.0
42	9 36	3 25	9 31*a*	3 41*b*	1.2	1.6	0.7	1.7	0.3	0.1	.....	0.3	0.8	0.8	13.5
43	9 46	3 23	9 39*a*	3 54*b*	1.4	1.9	0.8	1.9	0.3	0.1	.....	0.3	1.0	0.9	13.5
44	10 13	4 00	10 09*a*	4 13*b*	1.6	2.1	0.9	2.1	0.3	0.1	.....	0.3	1.0	1.0	14.0
45	10 16	3 55	10 12*a*	4 04*b*	3.2	4.1	2.1	3.8	0.4	0.1	.....	0.4	2.0	1.8	14.0
46	10 35	4 23	9 58*a*	3 52*b*	4.3	5.7	2.8	4.6	0.3	0.4	.....	0.5	2.8	2.4	14.0
47	11 00	4 48	10 26*a*	4 20*b*	4.6	6.0	2.9	4.9	0.3	0.4	.....	0.5	3.0	2.5	13.0
48	11 18	5 04	10 49*a*	4 40*b*	6.4	8.4	4.1	6.8	0.4	0.5	.....	0.6	4.2	3.4	11.0
49	11 35	5 23	10 58*a*	4 52*b*	5.2	6.9	3.3	5.6	0.4	0.5	.....	0.6	3.4	2.8	10.0
50	11 50	5 37	11 22*a*	5 14*b*	6.7	8.8	4.3	7.1	0.4	0.5	.....	0.6	4.4	3.6	9.5
51	0 42	6 55	0 42*b*	6 55*b*	5.6	7.0	4.0	5.7	0.7	0.4	.....	0.8	3.5	2.8	7.5
52	1 35	7 48	1 35*b*	7 48*b*	6.2	7.8	4.4	6.8	0.7	0.4	.....	0.8	3.9	3.1	5.5
53	2 20	8 40	2 20*b*	8 40*b*	6.6	8.3	4.7	7.2	0.8	0.4	.....	0.9	4.2	3.3	2.5
54	5 38	11 57	5 40*b*	11 57*b*	7.2	9.0	5.1	7.8	0.8	0.4	.....	0.9	4.5	3.6	3.0E.
															East.
55	6 43	0 45	6 43*b*	0 45*a*	5.8	7.3	4.1	6.4	0.7	0.4	.....	0.8	3.6	2.9	3.0
56	7 04	1 05	7 04*b*	1 05*a*	5.4	6.7	3.8	5.9	0.7	0.3	.....	0.8	3.4	2.7	5.0
57	7 10	1 00	7 10*b*	1 00*a*	10.1	12.6	7.2	10.9	1.0	0.5	.....	1.1	6.3	5.0	6.5
58	8 10	2 00	8 10*b*	2 00*a*	9.2	11.5	6.5	9.8	0.9	0.4	.....	1.0	5.8	4.6	7.5
59	9 05	2 55	9 05*b*	2 55*a*	11.1	13.9	7.8	11.9	1.0	0.5	.....	1.1	7.0	5.6	8.5

Number.	Station.	Geographic position.			Standard port for reference.		Tidal differences.				Ratio of ranges.
		Latitude.	Longitude.		Name.	Page.	Time.		Height.		
			Arc.	Time.			HW.	LW.	HW.	LW.	
	EUROPE (WEST COAST)—Cont'd.										
	RUSSIA—continued.										
	White Sea.	*North.*	*East.*				*Local time.*		*Mean Low Water Springs.*		
		° ′	° ′	*h. m.*			*h. m.*	*h. m.*	*feet.*	*feet.*	
1	Cape Orlov	67 11	41 22	2 45	Brest	285	−5 44	−5 56	+ 0.4	−0.4	1.05
2	Morjovets Island	66 46	42 30	2 50	Brest	285	−5 12	−5 24	− 2.0	−0.8	0.91
3	Mezen	65 48	44 20	2 57	Brest	285	−2 20	−2 13	− 1.0	−0.6	0.97
4	Sosnovets Island	66 29	40 43	2 43	Brest	285	−4 48	−4 57	− 1.2	−0.8	0.95
5	Tetrina	66 02	38 21	2 33	Cape Town	273	+1 30	+1 35	+ 1.8	0.0	1.53
6	Kandalaksha	67 08	32 28	2 10	Cape Town	273	+1 39	+2 03	+ 2.0	+0.2	1.59
7	Jijginsk Island	65 12	36 49	2 27	Cape Town	273	+3 29	+3 43	− 0.6	−0.2	0.88
8	Onega	63 57	38 07	2 32	Cape Town	273	−5 00	−4 38	+ 4.2	+0.4	2.15
9	Karetski Noss	65 38	39 40	2 39	Cape Town	273	+2 43	+2 57	+ 0.6	0.0	1.24
10	Archangel, Dwina River	64 36	40 41	2 43	Apia	221	+0 23	+1 18	− 0.9	−0.1	0.69
	SPITZBERGEN.										
11	Danes Island	79 41	11 02	0 44	Cape Town	273	−1 19	−1 19	+ 0.6	0.0	1.24
12	Recherche Bay	77 30	14 44	0 59	Cape Town	273	−0 37	−0 36	+ 1.9	+0.1	1.56
	FRANZ JOSEF LAND.										
13	Cape Flora	79 57	49 59	3 20	Melbourne	237	−4 58	−5 04	− 0.8	−0.1	0.59
14	Teplitz Bay	81 47	57 59	3 50	Sitka	169	−6 45	−6 46	− 8.0	−1.4	0.14
	NOVA ZEMBLA.										
15	Cape Costin	70 58	53 10	3 33	Cape Town	273	+8 21	+8 25	+ 2.2	+0.2	1.65
16	Matoshkin Shar, west entrance	73 17	54 21	3 37	Cape Town	273	+7 51	+7 55	+ 2.6	+0.2	1.74
17	Mashigin Bay	74 43	56 12	3 45	Cape Town	273	+9 21	+9 25	+ 2.4	+0.2	1.71

Number.	Interval.				Range of tide.				Tropic diurnal inequality.		Diurnal wave.		Mean sea level above plane of—		Variation of the compass.
	Mean.		Tropic.		Mean (Mn).	Spring (Sg).	Neap (Np).	Great tropic (Gc).	HWQ.	LWQ.	Tropic HW interval.	Tropic range.	Predictions.	Tropic LLW.	
	HWI.	LWI.	HHWI.	LLWI.											
	h. m.	*h. m.*	*h. m.*	*h. m.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*h. m.*	*feet.*	*feet.*	*feet.*	*East.* °
1	10 38	4 26	10 38*b*	4 26*a*	15.6	19.5	11.1	16.5	1.2	0.6	.....	1.3	9.8	7.8	9.5
2	11 10	4 58	11 10*b*	4 58*a*	13.5	16.8	9.6	14.2	1.1	0.5	.....	1.2	8.4	6.8	10.0
3	1 38	8 10	1 38*a*	8 10*a*	14.4	18.0	10.2	15.2	1.1	0.6	.....	1.3	9.0	7.2	10.5
4	11 34	5 25	11 34*b*	5 25*a*	14.2	17.7	10.1	15.0	1.1	0.6	.....	1.3	8.8	7.1	9.0
5	3 07	9 23	3 07*a*	9 23*a*	5.2	6.5	3.7	5.7	0.7	0.3	.....	0.8	3.2	2.6	7.5
6	3 15	9 50	3 15*a*	9 50*a*	5.4	6.7	3.8	5.9	0.7	0.3	.....	0.8	3.4	2.7	3.5
7	5 05	11 30	5 05*a*	11 30*a*	3.0	3.8	2.1	3.4	0.5	0.3	.....	0.6	1.9	1.5	6.0
8	9 02	3 10	9 02*a*	3 10*b*	7.3	9.1	5.2	7.9	0.8	0.4	.....	0.9	4.6	3.6	6.5
9	4 20	10 45	4 20*a*	10 45*a*	4.2	5.3	3.0	4.6	0.6	0.3	.....	0.7	2.6	2.1	8.0
10	7 18	2 00	7 18*a*	2 00*b*	1.8	2.2	1.3	2.1	0.4	0.2	.....	0.4	1.1	0.9	8.0
															West.
11	0 14	6 25	0 14*b*	6 25*b*	4.2	5.3	3.0	4.6	0.6	0.3	.....	0.7	2.6	2.1	14.0
12	0 56	7 08	0 56*b*	7 08*b*	5.3	6.6	3.8	5.8	0.7	0.3	.....	0.8	3.3	2.6	10.0
															East.
13	9 44	3 37	10 19*b*	3 22*b*	1.0	1.2	0.6	1.3	0.1	0.6	2 40	0.6	0.6	0.7	15.0
14	6 14	12 24	5 59*a*	12 33*a*	1.1	1.5	0.6	1.3	0.2	0.2	2 35	0.3	0.7	0.6	23.0
15	10 00	3 50	10 00*b*	3 50*a*	5.6	7.0	4.0	6.2	0.7	0.4	.....	0.8	3.5	2.8	17.0
16	9 30	3 20	9 30*b*	3 20*a*	5.9	7.4	4.2	6.5	0.7	0.4	.....	0.8	3.7	2.9	17.0
17	11 00	4 50	11 00*b*	4 50*a*	5.8	7.3	4.1	6.4	0.7	0.4	.....	0.8	3.6	2.9	18.5

No.	Station.	K_1 $K_1°$	K_2 $K_2°$	L_2 $L_2°$	M_1 $M_1°$	M_2 $M_2°$	M_4 $M_4°$	M_6 $M_6°$	N_2 $N_2°$	O_1 $O_1°$
1	St. Johns, Newfoundland	0.248 108	0.120 259	0.020 211	....	1.172 209.6	0.020 45	0.020 344	0.232 195	0.229 77
2	Halifax (Navy-Yard), Nova Scotia	0.338 60	0.136 257	0.109 258	0.012 57	2.085 228.5	0.116 25	0.014 72	0.458 205	0.156 88
3	St. John, New Brunswick	0.499 128	0.432 5	0.560 4	0.027 146	9.897 325.2	0.119 146	0.092 178	2.072 295	0.361 109
4	Portland (Central Wharf), Me	0.471 131	0.225 358	0.248 20	....	4.336 323.6	0.084 75	0.042 71	0.957 292	0.345 109
5	Boston (Navy-Yard), Mass	0.443 141	0.182 16	0.303 4	0.030 121	4.439 335.4	0.056 164	0.189 262	1.017 304	0.365 120
6	Newport (Fort Adams), R. I	0.209 96	0.098 239	0.016 210	0.008 70	1.661 217.5	0.179 120	0.011 127	0.365 200	0.164 124
7	New London (Custom-House Wharf), Conn	0.245 112	0.066 284	0.052 342	0.008 303	1.140 274.8	0.066 65	0.040 139	0.262 248	0.179 137
8	Willets Point (U. S. Engineer School), N. Y	0.339 119	0.146 359	0.300 3	0.020 166	3.649 328.6	0.096 211	0.210 84	0.744 304	0.198 150
9	New York (Governors Island), N. Y	0.325 106	0.118 255	0.129 249	0.016 104	2.153 231.1	0.087 332	0.076 89	0.496 211	0.161 104
10	Sandy Hook (The Horseshoe), N. J	0.333 102	0.123 243	0.110 208	0.016 119	2.219 217.6	0.026 336	0.054 353	0.503 201	0.172 98
11	Philadelphia (Chestnut Street Pier), Pa	0.316 218	0.091 78	0.210 61	0.025 329	2.366 48.6	0.368 7	0.112 206	0.388 28	0.252 203
12	Baltimore (Fells Point), Md	0.221 296	0.024 202	0.017 218	0.014 130	0.474 191.2	0.028 304	0.008 225	0.098 171	0.172 306
13	Washington (Seventh street), D. C	0.152 272	0.074 268	0.117 251	0.020 346	1.373 228.9	0.074 358	0.080 54	0.241 205	0.121 291
14	Old Point Comfort (Fort Monroe), Va	0.186 119	0.062 277	0.064 270	....	1.220 248.4	0.089 244	0.016 191	0.269 226	0.138 143
15	Wilmington (Cape Fear River), N. C	0.250 130	0.028 344	0.033 296	....	1.152 292.1	0.183 149	0.026 278	0.175 288	0.156 169
16	Charleston (Custom-House Wharf), S. C	0.338 126	0.090 288	0.132 235	0.020 106	2.378 217.4	0.123 296	0.033 305	0.538 200	0.247 126
17	Savannah Entrance (Tybee Light), Ga	0.341 114	0.154 246	0.135 198	....	3.219 209.5	0.058 287	0.021 286	0.677 190	0.245 120
18	Fernandina (Dade street), Fla	0.346 127	0.133 267	0.146 222	0.018 137	2.854 228.3	0.032 295	0.032 8	0.585 213	0.252 129
19	Key West (Fort Taylor), Fla	0.274 274	0.049 281	0.023 276	....	0.565 260.3	0.086 235	0.011 180	0.123 232	0.294 273
20	Galveston (Doswell's Wharf), Tex	0.346 321	0.018 132	0.014 174	....	0.224 124.5	0.002 128	0.004 29	0.058 111	0.333 312
21	Rio de Janeiro, Brazil	0.212 147	0.187 82	0.040 132	0.027 173	1.058 87.0	0.171 90	0.005 166	0.101 151	0.358 86
22	Buenos Aires, Argentina	0.253 18	0.014 344	0.048 220	....	0.814 184.7	0.073 90	0.018 292	0.341 149	0.448 211
23	Cape Horn (Orange Bay), Chile	0.707 36	0.064 128	0.052 109	0.020 350	1.981 104.2	0.016 197	0.017 313	0.491 66	0.587 347
24	Valparaiso, Chile	0.499 330	0.142 288	0.041 229	0.021 287	1.650 279.2	0.007 147	0.004 107	0.359 248	0.328 286
25	Panama (Naos Island), Panama Canal Zone	0.440 340	0.392 142	0.226 167	....	5.928 86.7	0.218 358	0.041 276	1.297 54	0.135 344
26	San Diego (La Playa), Cal	1.073 95	0.207 266	0.046 245	0.039 97	1.701 276.6	0.026 186	0.010 112	0.408 257	0.697 79
27	San Francisco (Fort Point), Cal	1.218 106	0.116 327	0.073 0	0.044 83	1.696 330.7	0.086 82	0.012 342	0.363 304	0.766 88
28	Astoria (Columbia River), Oreg	1.316 129	0.220 24	0.157 11	0.052 152	2.971 8.6	0.100 317	0.034 106	0.586 346	0.784 114
29	Port Townsend (Puget Sound), Wash	2.511 148	0.157 131	0.104 151	0.108 162	2.217 105.6	0.131 290	0.033 238	0.471 75	1.454 127
30	Sitka, Alaska	1.504 125	0.320 22	0.109 28	0.029 150	3.591 2.8	0.013 140	0.002 94	0.758 335	0.905 110
31	Kodiak (St. Paul Harbor, Kodiak I.), Alaska	1.330 139	0.301 39	0.106 358	0.060 150	3.228 7.7	0.038 97	0.032 239	0.676 342	0.897 122
32	St. Michael (Norton Sound), Alaska	1.354 297	0.033 338	0.026 292	0.076 272	0.554 235.4	0.042 150	0.018 266	0.179 178	0.760 247
33	Yokohama (Nishihatoba), Japan	0.802 179	0.187 178	0.027 138	....	1.566 154.3	0.048 98	0.012 109	0.236 145	0.621 161
34	Nagasaki, Japan	0.818 206	0.311 235	0.073 236	0.032 203	2.803 228.4	0.048 309	0.012 245	0.503 221	0.643 187
35	Tientsin Entrance (Taku Light Ship), China	1.330 157	0.145 162	0.026 114	....	3.474 94.4	0.281 99	....	0.184 74	0.948 126
36	Shanghai (Wusung Inner Bar), China	0.656 207	0.281 77	0.058 59	....	3.109 30.3	0.700 331	....	0.401 2	0.462 149

No.	P_1 P_1°	Q_1 Q_1°	S_2 S_2°	T_2 T_2°	λ_2 λ_2°	μ_2 μ_2°	ν_2 ν_2°	MS_4 MS_4°	Sa Sa°	Ssa Ssa°	Length of series analyzed.
1	0.069 86	0.045 61	0.480 254	.....	.....	.....	0.046 197	.....	0.200 268	0.071 217	Hourly Ordinates for 236 days beginning May 10, 1880.*
2	0.102 63	0.019 51	0.454 258	.....	.....	0.062 196	0.154 200	0.060 154	0.150 252	0.158 146	Hourly Ordinates for 5 years, 1851, 1852, 1860, 1861, and 1895-96.†
3	0.158 129	0.062 98	1.633 4	.....	.....	0.091 85	0.461 310	0.047 179	0.115 93	0.160 125	Hourly Ordinates for 8 years beginning April 30, 1894.†
4	0.138 132	0.065 83	0.684 0	0.040 0	.....	0.021 208	0.215 302	.....	0.200 178	0.016 181	Hourly Ordinates for 1 year beginning Aug. 1, 1864.*
5	0.148 137	0.057 125	0.707 14	0.042 14	.....	0.025 340	0.211 306	.....	0.094 116	0.061 99	Hourly Ordinates for 1 calendar year, 1869.*
6	0.069 115	0.047 116	0.884 237	0.028 237	0.012 288	0.078 199	0.060 204	.....	0.144 158	0.067 145	Hourly Ordinates for 1 year beginning Apr. 1, 1892.*
7	0.078 114	.....	0.214 288	.....	.....	.....	0.045 263	.....	0.241 158	0.120 90	Hourly Ordinates for 2 years, beginning Nov. 1, 1882, and May 12, 1899.*
8	0.091 134	.....	0.644 352	.....	.....	0.088 305	0.112 312	.....	0.158 110	0.118 111	Hourly Ordinates for 2 years, beginning July 1, 1891, and Jan. 1, 1894.*
9	0.105 104	0.081 108	0.418 257	0.073 183	0.025 186	0.068 217	0.093 241	.....	0.245 127	0.173 47	Hourly Ordinates for 8 calendar years, 1876, 1877, and 1878.*
10	0.105 105	0.082 110	0.426 246	.....	.....	0.068 226	0.096 199	.....	0.254 143	0.101 58	Hourly Ordinates for 8 calendar years, 1876 to 1881, 1887, and 1888.*
11	0.098 209	.....	0.315 88	0.019 88	.....	0.120 171	0.147 22	0.099 56	0.417 146	0.342 325	Hourly Ordinates for 2 calendar years, 1901 and 1902.*
12	0.075 284	0.033 267	0.084 217	0.005 217	0.008 208	0.008 97	0.022 181	.....	0.501 129	0.080 56	Hourly Ordinates for 1 year beginning Jan. 1, 1907.*
13	0.057 273	0.024 301	0.201 272	0.012 272	.....	.....	0.052 226	.....	0.272 128	0.194 163	Hourly Ordinates for 1 calendar year, 1899.*
14	0.064 114	0.044 130	0.227 269	.....	.....	.....	0.054 228	.....	0.320 126	0.106 161	Hourly Ordinates for 2 calendar years, 1865 and 1877.*
15	0.083 132	0.037 204	0.099 344	.....	.....	.....	0.034 288	0.033 201	0.302 173	0.027 94	Hourly Ordinates from 7 a. m. to 6 p. m. for 2 calendar years, 1887 and 1890.*
16	0.111 125	0.049 122	0.407 246	0.024 246	0.017 280	0.063 245	0.128 198	.....	0.244 141	0.308 70	Hourly Ordinates for 2 calendar years, 1859 and 1903.*
17	0.118 114	0.060 122	0.586 235	.....	.....	.....	0.118 200	.....	0.217 124	0.103 25	Hourly Ordinates for 1 year beginning Oct. 6, 1889.*
18	0.110 125	0.055 133	0.509 258	.....	.....	0.082 273	0.117 210	.....	0.406 186	0.308 207	Hourly Ordinates for 1 year beginning Jan. 1, 1899.*
19	0.091 273	0.058 271	0.172 280	.....	.....	.....	0.024 235	.....	0.377 216	0.075 86	Hourly Ordinates for 1 year beginning May 1, 1857.*
20	0.129 319	0.066 341	0.043 134	.....	.....	.....	0.010 113	.....	0.528 170	0.332 44	Hourly Ordinates for 1 calendar year, 1852.*
21	0.067 149	0.102 61	0.574 94	0.058 83	0.018 40	0.047 102	0.012 129	0.064 168	0.010 81	0.048 138	Hourly Ordinates for 1 year beginning Aug. 1, 1906.†‡
22	0.123 20	0.085 124	0.167 266	.....	.....	.....	0.067 152	.....	0.389 321	0.166 336	Hourly Ordinates interpolated from High and Low Waters for 1 calendar year, 1893.*
23	0.175 30	0.114 328	0.302 134	0.085 260	0.014 118	0.046 74	0.095 71	.....	0.156 92	0.013 87	Hourly Ordinates for 1 year beginning Sept. 1, 1882.*
24	0.161 322	0.064 264	0.466 300	.....	.....	0.034 259	0.069 252	.....	0.151 351	0.091 228	Hourly Ordinates for 1 year beginning Feb. 1, 1892.*
25	0.123 342	0.032 36	1.656 144	.....	0.033 281	0.185 83	0.151 59	.....	0.600 172	0.298 136	Hourly Ordinates for 1 calendar year, 1882.*
26	0.360 94	0.135 71	0.697 275	0.041 275	0.024 282	0.025 245	0.079 260	0.021 184	0.231 189	0.114 280	Hourly Ordinates for 3 calendar years, 1869-1871.*
27	0.368 104	0.124 83	0.382 335	0.023 335	.....	.....	0.070 307	0.039 37	0.398 156	0.184 221	Hourly Ordinates for 4 calendar years, 1863, 1864, 1865, and 1870.*
28	0.374 126	0.129 111	0.767 39	0.045 39	0.050 14	0.022 129	0.170 322	0.054 340	0.244 284	0.267 151	Hourly Ordinates for 2 calendar years, 1874 and 1875.*
29	0.800 147	0.237 119	0.546 130	0.032 130	0.032 166	0.081 353	0.094 84	0.067 313	0.270 288	0.131 225	Hourly Ordinates for 3 calendar years, 1874-1876.*
30	0.450 124	0.157 98	1.145 34	0.068 34	.....	0.085 321	0.142 343	.....	0.261 284	0.055 336	Hourly Ordinates for 1 year beginning June 27, 1893.*
31	0.444 134	0.161 112	1.077 41	0.064 41	.....	0.067 322	0.123 350	.....	0.335 196	0.176 112	Hourly Ordinates for 1 year beginning Sept. 1, 1885.*
32	0.448 297	0.150 228	0.121 338	0.007 338	.....	.....	0.035 186	.....	.....	.....	Hourly Ordinates for 58 days in 1891, 29 days in 1898, and 58 days in 1899.*
33	0.298 175	0.127 142	0.731 185	.....	.....	.....	0.046 146	.....	0.341 190	0.100 118	Hourly Ordinates for 1 calendar year, 1893.*
34	0.271 206	0.125 177	1.221 256	0.072 256	0.020 241	0.067 201	0.098 222	.....	.....	.....	Hourly Ordinates for 3 months, Mar., Apr., and May, 1891.‡
35	0.440 155	0.184 110	0.582 157	0.031 154	.....	.....	0.086 77	0.086 161	.....	.....	High and Low Waters for 2 months, Sept. and Oct., 1888.*
36	0.217 207	0.090 120	1.032 77	0.061 76	.....	.....	0.078 6	0.465 18	1.518 128	0.478 73	High and Low Waters for 1 calendar year, 1893.*

No.	Station.	K_1 $K_1°$	K_2 $K_2°$	L_2 $L_2°$	M_1 $M_1°$	M_2 $M_2°$	M_4 $M_4°$	M_6 $M_6°$	N_2 $N_2°$	O_1 $O_1°$
37	Amoy (Inner Harbor), China	0.868 274	0.364 61	0.111 30	....	6.125 1.2	0.042 92	....	0.776 332	0.639 252
38	Hongkong, China	1.190 296	0.147 280	0.083 274	0.060 100	1.438 266.5	0.076 322	0.014 140	0.280 255	0.904 246
39	Singapore, Malay Peninsula	0.949 100	0.318 345	0.197 310	....	2.602 300.0	0.053 264	0.035 43	0.452 272	0.948 53
40	Batavia (Tandjong Priok), Java	0.867 143	0.073 268	0.027 110	0.046 188	0.174 350	....	....	0.069 314	0.443 120
41	Manila (Pasig River Entr.), Philippine Islands	0.974 320	0.069 325	0.019 320	0.026 306	0.665 305.1	0.018 352	0.006 285	0.126 291	0.928 279
42	Honolulu (Oahu Island), Hawaiian Islands	0.475 72	0.043 97	0.015 102	....	0.523 109.4	0.001 28	0.002 69	0.086 98	0.260 60
43	Apia (Upolu Island), Samoan Islands	0.093 254	0.081 181	0.076 139	....	1.255 186.0	....	....	0.308 166	0.070 243
44	Wellington, New Zealand	0.085 81	0.060 339	0.034 71	0.007 106	1.598 137	0.045 332	0.015 135	0.353 104	0.099 36
45	Auckland, New Zealand	0.241 167	0.171 265	0.144 209	0.011 144	3.782 204.8	0.200 74	0.100 67	0.760 174	0.071 121
46	Sydney (Fort Denison), New South Wales	0.419 129	0.102 268	0.065 237	....	1.636 254.0	....	....	0.324 250	0.337 86
47	Melbourne (Williamstown), Victoria	0.294 132	0.028 172	0.013 74	....	0.806 69.4	0.021 49	....	0.093 65	0.216 95
48	Port Adelaide, South Australia	0.830 52	0.465 178	0.120 140	0.020 16	1.700 120.0	0.020 174	0.010 259	0.090 246	0.520 32
49	Rangoon, Burma	0.675 85	0.616 169	0.466 147	0.029 86	5.793 131.8	0.432 170	0.220 86	1.055 116	0.289 27
50	Calcutta (Kidderpore), India	0.392 54	0.447 94	0.206 71	0.026 107	3.634 57.6	0.740 37	0.154 322	0.669 44	0.206 21
51	Madras, India	0.292 342	0.117 277	0.041 300	0.013 337	1.087 250.2	0.007 198	0.008 157	0.287 242	0.098 327
52	Colombo (Ceylon), India	0.238 33	0.108 90	0.027 51	0.010 327	0.579 49.9	0.016 170	0.004 27	0.073 34	0.094 62
53	Bombay (Apollo Bandar), India	1.398 45	0.405 354	0.080 306	0.053 47	4.038 330.3	0.130 329	0.010 86	0.996 314	0.660 48
54	Karachi, India	1.294 46	0.278 319	0.080 297	0.044 43	2.537 293.7	0.028 7	0.048 206	0.605 277	0.654 47
55	Aden, Arabia	1.303 35	0.200 239	0.042 228	0.050 32	1.568 226.3	0.006 313	0.005 342	0.431 221	0.657 37
56	Cape Town (Table Bay), Africa	0.178 127	0.245 90	0.072 47	0.011 66	1.596 44.5	0.039 96	0.013 296	0.344 22	0.053 243
57	Lisbon (Arsenal), Portugal	0.209 89	0.441 83	0.154 61	....	4.139 51.1	0.252 196	0.035 284	1.059 41	0.217 309
58	Rochelle, France	0.205 72	0.589 126	0.126 111	0.023 109	5.719 93.0	0.804 2	0.088 316	1.163 70	0.234 324
59	Brest, France	0.207 69	0.712 137	0.244 96	0.007 166	6.763 99.2	0.182 85	0.116 325	1.388 80	0.222 324
60	Havre, France	0.297 119	0.846 331	0.601 302	....	8.745 285.5	0.786 85	0.574 301	1.703 262	0.161 7
61	Edinburgh (Leith), Scotland	0.316 204	0.345 88	0.167 70	....	5.938 48.5	0.231 178	0.243 224	1.152 27	0.623 70
62	Hull (Humber River), England	0.560 282	0.636 228	0.390 198	....	7.561 175.8	0.345 258	0.164 211	1.254 164	0.433 119
63	Sheerness (Thames River Entrance), England	0.377 14	0.470 47	0.347 6	....	6.297 0.5	0.296 44	0.199 60	1.046 337	0.451 193
64	London (London Bridge), England	0.300 41	0.450 101	0.605 92	....	8.313 55.0	0.821 20	....	1.467 25	0.400 220
65	Dover, England	0.140 48	0.563 28	0.377 354	....	7.208 336.1	0.740 229	0.173 102	1.353 320	0.183 186
66	Liverpool, England	0.355 191	0.936 1	0.529 329	0.031 300	9.975 320.7	0.691 211	0.196 331	1.903 300	0.371 38
67	Greenock (Firth of Clyde), Scotland	0.193 224	0.284 27	0.259 316	....	4.357 337.0	0.346 44	....	0.707 309	0.241 54
68	Kingstown (Dublin Bay), Ireland	....	0.280 351	0.221 320	....	4.166 312.0	0.109 354	....	0.794 290	....
69	Queenstown (Haulbowline Island), Ireland	0.062 160	0.500 174	0.316 137	0.015 24	4.486 133.3	0.199 210	0.043 138	0.862 113	0.139 37
70	Hamburg, Germany	0.334 160	0.171 222	0.078 148	0.021 79	2.787 145.2	0.492 212	0.089 154	0.430 143	0.242 359

On the first line for each station the amplitudes (H) are given in feet, and on the second line the epochs (κ) in degrees. The British system has been adopted throughout this table.

* United States Coast and Geodetic Survey.

† Tidal and Current Survey of Canada.

No.	P_1 P_1°	Q_1 Q_1°	S_2 S_2°	T_2 T_2°	λ_2 λ_2°	μ_2 μ_2°	ν_2 ν_2°	MS_4 MS_4°	Sa Sa°	Ssa Ssa°	Length of series analyzed.
37	0.287 272	0.124 241	1.338 57	0.079 55	....	....	0.151 336	....	....	....	High and Low Waters for 2 months, Jan. and Feb., 1892.*
38	0.284 288	0.156 230	0.564 291	0.035 281	....	0.071 238	0.061 212	0.067 301	0.450 234	0.190 94	Hourly Ordinates for 2 calendar years, 1888 and 1889.§
39	0.291 93	0.190 16	1.067 348	....	....	0.051 97	0.058 226	....	0.308 209	0.312 234	Hourly Ordinates for 1 year beginning Oct. 1, 1882. §
40	0.254 142	0.113 110	0.181 294	....	0.021 127	0.032 205	0.016 343	....	....	....	Hourly Ordinates for 7 years, 1887–1888, 1890–1891, 1891–1892, and 1901 to 1904.§§
41	0.304 317	0.181 254	0.222 338	0.013 338	0.005 321	0.016 272	0.024 292	....	0.386 152	0.065 42	Hourly Ordinates for 2 years beginning Feb. 12, 1901, and Sept. 25, 1902.*
42	0.137 66	0.040 51	0.165 109	....	....	....	0.013 138	....	0.215 197	0.090 33	Hourly Ordinates for 1 year beginning June 17, 1891.*
43	0.030 252	....	0.289 184	....	....	....	....	....	....	....	From the German Tide Tables for 1903.
44	0.028 67	0.019 18	0.089 325	....	....	....	0.068 108	....	0.241 54	0.085 240	Hourly Ordinates for 1 calendar year, 1894.*
45	0.079 169	0.018 85	0.626 265	0.037 265	0.026 233	0.091 144	0.147 178	....	0.357 88	0.185 266	High and Low Waters for 2 calendar years, 1896* and 1900.††
46	0.139 129	....	0.375 268	....	....	....	....	....	0.093 16	0.008 97	High and Low Waters for 1 year, 1888. ††
47	0.097 129	0.042 77	0.103 164	0.006 161	....	....	0.018 66	....	....	....	High and Low Waters for 1 month, May, 1894.*
48	0.215 56	0.070 31	1.680 181	0.110 165	....	....	0.060 76	0.090 99	0.305 126	0.225 88	Hourly Ordinates for 2 years beginning Mar. 1, 1889, and Jan. 1, 1893. ‖
49	0.164 56	0.027 41	2.093 176	0.268 161	0.253 170	0.530 290	0.354 111	0.404 212	1.314 147	0.164 337	Hourly Ordinates for 16 years, 1880–1894, and 1900. ¶
50	0.141 44	0.029 358	1.502 100	0.139 149	0.089 93	0.237 187	0.227 22	0.673 80	2.853 156	0.934 330	Hourly Ordinates for 15 years, 1881–1894, and 1900. ¶
51	0.094 345	0.008 106	0.438 280	0.044 299	0.022 267	0.046 181	0.074 259	0.006 254	0.392 216	0.321 126	Hourly Ordinates for 11 years, 1880–1889, and 1900. ¶
52	0.072 26	0.032 88	0.391 95	0.084 54	0.024 44	0.017 104	0.018 41	0.009 253	0.313 308	0.133 111	Hourly Ordinates for 6 years beginning Feb. 1, 1884. ¶
53	0.408 44	0.137 49	1.606 4	0.168 15	0.028 210	0.200 305	0.187 311	0.138 80	0.107 349	0.136 204	Hourly Ordinates for 18 years, 1878–1894, and 1900. ¶
54	0.386 46	0.131 50	0.952 323	0.080 337	0.042 280	0.061 268	0.140 278	0.031 320	0.130 68	0.152 149	Hourly Ordinates for 28 years, 1868–1894, and 1900. ¶
55	0.393 31	0.148 38	0.684 246	0.052 240	0.027 198	0.075 193	0.098 227	0.017 157	0.381 356	0.127 131	Hourly Ordinates for 17 years, 1879–1894, and 1900. ¶
56	0.048 114	0.010 300	0.672 88	....	....	....	0.067 25	....	0.124 256	0.111 76	Hourly Ordinates for 1 calendar year, 1888.*
57	0.069 39	0.042 265	1.620 83	0.096 83	....	0.099 19	0.205 43	0.195 228	....	....	Hourly Ordinates for January, 1897.*
58	0.078 66	0.076 275	2.029 126	0.119 128	....	0.164 92	0.148 81	0.513 88	0.401 257	0.080 123	From Annales Hydrographiques, Paris, 1901.
59	0.072 60	0.086 278	2.471 139	0.129 128	....	0.246 89	0.361 57	0.264 107	0.203 229	0.086 154	Hourly Ordinates for 2 calendar years, 1878 and 1875.**
60	0.089 103	0.029 344	2.888 333	0.184 323	....	0.348 320	0.462 288	0.407 170	0.311 218	0.148 151	Hourly Ordinates for 1 calendar year, 1895.**
61	0.104 204	0.121 4	2.004 88	....	....	0.143 9	0.223 30	....	0.177 220	0.082 113	Hourly Ordinates for 15 days beginning May 1, 1891.*
62	0.185 282	0.084 38	2.338 228	0.138 228	0.053 200	0.338 273	0.408 161	....	....	....	Hourly Ordinates for 29 days beginning May 9, 1864. *
63	0.135 350	0.087 283	1.750 56	....	....	....	0.208 340	....	0.209 196	0.046 155	Hourly Ordinates for 1 year beginning Dec. 21, 1843.*
64	0.100 18	....	1.640 110	....	....	0.340 159	0.465 43	....	0.124 112	0.131 197	Inferred from constants for Sheerness and British Tide Tables for 1894.
65	0.050 21	....	2.070 28	....	....	0.407 66	0.390 290	0.450 290	....	....	Hourly Ordinates for 3 calendar years, 1883, 1884, and 1885. §
66	0.128 182	....	3.161 6	0.235 327	0.228 330	0.255 33	0.529 286	0.406 258	0.362 238	0.142 189	Hourly Ordinates for 7 years, 1857–1860, and 1866–1870. §
67	0.063 137	0.040 327	1.036 42	....	....	0.105 272	0.137 312	....	0.485 240	0.058 183	High and Low Waters for 1 calendar year, 1807.*
68	....	....	1.030 356	....	....	0.108 25	0.223 277	....	....	....	Devised from British Tide Tables for 1894.
69	0.020 160	0.027 335	1.399 177	0.083 177	0.031 154	0.106 208	0.205 105	0.123 254	0.229 227	0.020 94	Hourly Ordinates for 162.5 days beginning May 23, 1904.*
70	0.110 160	0.047 279	0.626 222	0.037 222	0.019 181	0.467 226	0.140 205	....	....	....	Hourly Ordinates for 29 days beginning Aug. 1, 1901.

‡ Japanese Government.
§ Proc. Roy. Soc. 1885, 1889, or 1902.
‖ R. W. Chapman and Captain Inglis.
¶ Reports of the Survey of India.
** Service Hydrographique de la Marine, France.
†† The Admiralty, London, England.
§§ J. P. Van der Stok.
‡‡ Brazilian Government.

Number.	Station.	January.		February.		March.		April.		May.	
		1	16	1	16	1	16	1	16	1	16
		feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.
1	St. Johns, Newfoundland	+0.3	+0.3	+0.2	+0.1	0.0	0.0	−0.1	−0.2	−0.2	−0.2
2	Halifax, Nova Scotia	+0.1	0.0	−0.2	−0.2	−0.2	−0.1	−0.1	0.0	+0.1	+0.1
3	St. John, New Brunswick	−0.1	−0.2	−0.2	−0.2	−0.2	−0.1	0.0	+0.1	+0.2	+0.2
4	Portland, Me	0.0	−0.1	−0.1	−0.2	−0.2	−0.2	−0.2	−0.2	−0.2	−0.1
5	Boston, Mass	−0.1	−0.1	−0.2	−0.2	−0.1	−0.1	0.0	0.0	+0.1	+0.1
6	Newport, R. I	0.0	−0.1	−0.1	−0.2	−0.2	−0.2	−0.2	−0.1	0.0	0.0
7	New London, Conn	−0.2	−0.3	−0.3	−0.3	−0.3	−0.3	−0.2	−0.1	0.0	+0.1
8	Willets Point, N. Y	0.0	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	0.0	+0.1	+0.1
9	New York, N. Y	−0.4	−0.4	−0.4	−0.3	−0.2	−0.1	0.0	+0.1	+0.2	+0.2
10	Sandy Hook, N. J	−0.3	−0.3	−0.3	−0.3	−0.2	−0.2	−0.1	0.0	0.0	+0.1
11	Philadelphia, Pa	−0.5	−0.4	−0.2	−0.1	−0.1	−0.1	−0.1	−0.2	−0.3	−0.3
12	Baltimore, Md	−0.5	−0.6	−0.6	−0.5	−0.4	−0.3	−0.2	−0.1	+0.1	+0.2
13	Washington, D. C	−0.1	−0.2	−0.3	−0.4	−0.4	−0.4	−0.3	−0.1	0.0	+0.2
14	Old Point Comfort, Va	−0.2	−0.3	−0.3	−0.4	−0.4	−0.3	−0.2	−0.1	0.0	+0.1
15	Wilmington, N. C	−0.1	−0.2	−0.3	−0.3	−0.3	−0.3	−0.3	−0.2	−0.2	−0.1
16	Charleston, S. C	−0.4	−0.5	−0.5	−0.5	−0.4	−0.2	0.0	+0.2	+0.3	+0.3
17	Savannah Entrance, Ga	−0.3	−0.3	−0.3	−0.2	−0.1	0.0	0.0	+0.1	+0.1	+0.1
18	Fernandina, Fla	+0.3	+0.2	+0.1	−0.2	−0.3	−0.5	−0.7	−0.7	−0.6	−0.5
19	Key West, Fla	+0.1	0.0	−0.1	−0.2	−0.3	−0.3	−0.3	−0.3	−0.3	−0.3
20	Galveston, Tex	−0.5	−0.6	−0.6	−0.6	−0.5	−0.3	−0.2	−0.1	−0.1	−0.1
21	Rio de Janeiro, Brazil	0.0	0.0	0.0	0.0	−0.1	0.0	0.0	0.0	0.0	0.0
22	Buenos Aires, Argentina	+0.2	+0.3	+0.4	+0.5	+0.5	+0.5	+0.4	+0.2	0.0	−0.1
23	Cape Horn, South America	−0.2	−0.2	−0.1	−0.1	−0.1	0.0	0.0	+0.1	+0.1	+0.1
24	Valparaiso, Chile	+0.1	+0.2	+0.2	+0.2	+0.2	+0.1	+0.1	0.0	0.0	0.0
25	Panama, Panama Canal Zone	−0.1	−0.4	−0.6	−0.8	−0.9	−0.9	−0.7	−0.5	−0.3	0.0
26	San Diego, Cal	0.0	0.0	0.0	−0.1	−0.1	−0.2	−0.2	−0.3	−0.3	−0.3
27	San Francisco Entrance, Cal	+0.1	0.0	−0.1	−0.2	−0.4	−0.5	−0.5	−0.5	−0.4	−0.3
28	Astoria, Oreg	+0.4	+0.3	+0.1	0.0	−0.1	−0.2	−0.2	−0.1	0.0	0.0
29	Port Townsend, Wash	+0.4	+0.4	+0.4	+0.3	+0.2	0.0	−0.1	−0.2	−0.2	−0.2
30	Sitka, Alaska	+0.2	+0.2	+0.3	+0.3	+0.2	+0.1	+0.1	0.0	−0.1	−0.2
31	Kodiak (St. Paul Harbor), Alaska	0.0	−0.1	−0.3	−0.4	−0.4	−0.4	−0.3	−0.3	−0.2	−0.1
32	St. Michael, Alaska									−0.7	−0.5
33	Yokohama, Japan	0.0	0.0	−0.1	−0.2	−0.2	−0.3	−0.3	−0.3	−0.2	−0.1
34	Nagasaki, Japan										
35	Tientsin Entrance, China										
36	Shanghai, China	−1.6	−1.9	−2.0	−1.8	−1.5	−1.0	−0.5	−0.1	+0.4	+0.8
37	Amoy, China										
38	Hongkong, China	+0.2	+0.1	−0.1	−0.2	−0.2	−0.3	−0.3	−0.3	−0.2	−0.3
39	Singapore, Malay Peninsula	+0.4	+0.3	+0.2	0.0	−0.2	−0.3	−0.5	−0.6	−0.8	−0.5
40	Batavia, Java										
41	Manila, Philippine Islands	−0.3	−0.4	−0.4	−0.4	−0.4	−0.3	−0.2	−0.2	−0.1	0.0
42	Honolulu, Hawaiian Islands	−0.1	−0.1	−0.1	−0.2	−0.2	−0.1	−0.1	−0.1	−0.1	−0.2
43	Apia, Samoa Islands										
44	Wellington, New Zealand	0.0	0.0	0.0	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1
45	Auckland, New Zealand	−0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.2	+0.2
46	Sydney, New South Wales	0.0	0.0	0.0	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1
47	Melbourne, Victoria	−0.2	−0.2	−0.3	−0.3	−0.3	−0.2	0.0	+0.2	+0.3	+0.4
48	Port Adelaide, South Australia	+0.1	0.0	−0.1	−0.3	−0.3	−0.2	−0.1	0.0	+0.1	+0.2
49	Rangoon, India	−0.8	−1.1	−1.2	−1.2	−1.2	−1.1	−1.0	−0.8	−0.6	−0.3
50	Calcutta, India	−1.8	−1.8	−1.8	−1.8	−1.8	−1.8	−1.9	−1.9	−1.8	−1.6
51	Madras, India	+0.3	+0.1	−0.2	−0.4	−0.5	−0.5	−0.5	−0.3	−0.2	−0.1
52	Colombo, Ceylon, India	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.1	−0.1
53	Bombay, India	+0.2	+0.2	+0.2	+0.2	+0.1	0.0	0.0	−0.1	−0.1	−0.1
54	Karachi, India	0.0	−0.1	−0.1	−0.2	−0.1	0.0	0.0	+0.1	+0.2	+0.2
55	Aden, Arabia	+0.1	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.4	+0.4	+0.3
56	Cape Town, Africa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	Lisbon, Portugal										
58	Rochelle, France	+0.4	+0.3	+0.2	+0.1	0.0	−0.1	−0.2	−0.2	−0.3	−0.3
59	Brest, France	+0.2	+0.1	0.0	−0.1	−0.2	−0.2	−0.2	−0.2	−0.2	−0.2
60	Havre, France	+0.2	+0.1	−0.1	−0.2	−0.3	−0.4	−0.4	−0.3	−0.3	−0.2
61	Edinburgh (Leith), Scotland	+0.1	0.0	−0.1	−0.1	−0.2	−0.2	−0.2	−0.1	−0.1	−0.1
62	Hull, England										
63	Sheerness, England	0.0	0.0	−0.1	−0.1	−0.2	−0.2	−0.2	−0.2	−0.2	−0.1
64	London, England	0.0	0.0	−0.1	−0.1	−0.2	−0.2	−0.2	−0.1	0.0	+0.1
65	Dover, England										
66	Liverpool, England	+0.4	+0.3	+0.1	0.0	−0.2	−0.3	−0.4	−0.4	−0.4	−0.3
67	Greenock, Scotland	+0.4	+0.3	+0.2	0.0	−0.1	−0.3	−0.4	−0.4	−0.5	−0.5
68	Kingstown, Ireland										
69	Queenstown, Ireland	+0.1	+0.1	0.0	−0.1	−0.1	−0.1	−0.2	−0.2	−0.2	−0.2
70	Hamburg, Germany										

Number.	June.		July.		August.		September.		October.		November.		December.	
	1	16	1	16	1	16	1	16	1	16	1	16	1	16
	feet.	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*	*feet.*
1	−0.2	−0.2	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	0.0	0.0	+0.1	+0.1	+0.2	+0.2
2	0.0	0.0	−0.1	−0.2	−0.3	−0.3	−0.2	−0.1	0.0	+0.2	+0.3	+0.3	+0.3	+0.2
3	+0.3	+0.2	+0.2	+0.1	0.0	−0.1	−0.1	−0.1	−0.1	0.0	0.0	+0.1	0.0	0.0
4	−0.1	0.0	0.0	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.1	+0.1	0.0	0.0
5	+0.1	+0.1	+0.1	0.0	0.0	0.0	0.0	0.0	0.0	+0.1	+0.1	0.0	0.0	−0.1
6	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	0.0
7	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.1	0.0	−0.1
8	+0.2	+0.2	+0.2	+0.2	+0.1	0.0	0.0	−0.1	−0.1	−0.1	−0.1	−0.1	0.0	0.0
9	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.3	+0.3	+0.2	+0.1	0.0	−0.1	−0.3
10	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.3	+0.2	+0.2	+0.1	−0.1	−0.2
11	−0.2	−0.1	+0.1	+0.3	+0.5	+0.7	+0.7	+0.7	+0.5	+0.3	0.0	−0.3	−0.4	−0.5
12	+0.3	+0.3	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.3	+0.2	+0.1	−0.1	−0.2	−0.4
13	+0.3	+0.4	+0.4	+0.3	+0.2	+0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	+0.3	+0.3	+0.4	+0.4	+0.3	+0.2	+0.2	+0.1	+0.1	0.0	0.0	0.0	−0.1	−0.2
15	−0.1	0.0	+0.1	+0.1	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.2	+0.2	+0.1	0.0
16	+0.2	+0.1	0.0	−0.1	−0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.4	+0.2	0.0	−0.2
17	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.1	0.0	−0.1	−0.2	−0.2
18	−0.2	0.0	+0.2	+0.4	+0.4	+0.4	+0.3	+0.2	+0.1	+0.1	+0.1	+0.2	+0.3	+0.3
19	−0.3	−0.2	−0.2	−0.1	−0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.4	+0.4	+0.3	+0.3
20	−0.1	−0.2	−0.1	0.0	+0.1	+0.3	+0.5	+0.7	+0.3	+0.3	+0.6	+0.4	+0.1	−0.2
21	+0.1	+0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	−0.3	−0.4	−0.4	−0.4	−0.3	−0.3	−0.2	−0.2	−0.1	−0.1	−0.1	−0.1	0.0	+0.1
23	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	0.0	0.0	0.0	−0.1	−0.1	−0.1	−0.2
24	0.0	0.0	0.0	0.0	0.0	−0.1	−0.2	−0.2	−0.2	−0.2	−0.2	−0.1	0.0	+0.1
25	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.6	+0.5	+0.4	+0.2
26	−0.2	−0.1	0.0	+0.1	+0.2	+0.3	+0.3	+0.3	+0.2	+0.2	+0.1	0.0	0.0	0.0
27	−0.1	+0.1	+0.2	+0.3	+0.4	+0.4	+0.4	+0.3	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2
28	+0.1	0.0	−0.1	−0.2	−0.3	−0.4	−0.4	−0.3	−0.2	0.0	+0.2	+0.4	+0.5	+0.5
29	−0.2	−0.2	−0.2	−0.1	−0.1	−0.2	−0.2	−0.2	−0.2	−0.1	0.0	+0.1	+0.2	+0.3
30	−0.3	−0.3	−0.3	−0.3	−0.2	−0.2	−0.1	0.0	0.0	+0.1	+0.1	+0.1	+0.2	+0.2
31	0.0	0.0	0.0	0.0	0.0	0.0	+0.1	+0.2	+0.3	+0.4	+0.5	+0.4	+0.4	+0.2
32	−0.2	+0.1	+0.5	+0.7	+0.7	+0.6	+0.3	−0.1	−0.5					
33	−0.1	0.0	0.0	0.0	+0.1	+0.1	+0.2	+0.3	+0.3	+0.4	+0.4	+0.3	+0.3	+0.1
34														
35														
36	+1.0	+1.0	+1.1	+1.1	+1.1	+1.1	+1.1	+1.1	+1.0	+0.8	+0.4	0.0	−0.5	−1.1
37														
38	−0.3	−0.3	−0.4	−0.4	−0.3	−0.2	0.0	+0.2	+0.4	+0.5	+0.6	+0.6	+0.6	+0.4
39	−0.3	−0.1	+0.1	+0.3	+0.3	+0.3	+0.2	+0.1	+0.1	0.0	0.0	+0.1	+0.2	+0.3
40														
41	0.0	+0.1	+0.2	+0.2	+0.3	+0.4	+0.4	+0.4	+0.4	+0.3	+0.2	+0.1	−0.1	−0.2
42	−0.2	−0.1	−0.1	0.0	0.0	+0.1	+0.2	+0.3	+0.3	+0.3	+0.3	+0.2	+0.1	0.0
43														
44	+0.1	+0.1	+0.1	0.0	0.0	−0.1	−0.1	−0.1	−0.1	−0.2	−0.2	−0.1	−0.1	−0.1
45	+0.2	+0.2	+0.2	+0.1	+0.1	0.0	−0.1	−0.2	−0.3	−0.4	−0.5	−0.5	−0.4	−0.3
46	+0.1	0.0	0.0	0.0	0.0	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	0.0	0.0
47	+0.5	+0.4	+0.3	+0 2	0.0	−0.1	−0.2	−0.2	−0.2	−0.1	0.0	0.0	0.0	−0.1
48	+0.3	+0.4	+0.3	+0.3	+0.2	+0.1	0.0	0.0	−0.1	−0.1	−0.2	−0.2	−0.1	0.0
49	+0.1	+0.4	+0.8	+1.1	+1.3	+1.5	+1.5	+1.4	+1.2	+0.8	+0.5	+0.4	+0.3	+0.3
50	−0.8	−0.1	+0.9	+1.8	+2.8	+3.4	+3.6	+3.3	+2.7	+1.8	+0.9	−0.2	−0.9	−1.5
51	−0.1	0.0	−0.1	−0.1	−0.2	−0.2	−0.1	0.0	+0.2	+0.4	+0.6	+0.7	+0.7	+0.6
52	0.0	−0.1	−0.2	−0.3	−0.4	−0.4	−0.4	−0.3	−0.2	−0.1	+0.1	+0.2	+0.2	+0.2
53	0.0	0.0	0.0	0.0	0.0	−0.1	−0.1	−0.2	−0.2	−0.2	−0.1	0.0	+0.1	+0.2
54	+0.3	+0.3	+0.2	+0.1	0.0	−0.1	−0.1	−0.2	−0.1	−0.1	−0.1	0.0	0.0	0.0
55	+0.2	+0.1	0.0	−0.1	−0.3	−0.4	−0.5	−0.5	−0.5	−0.3	−0.2	−0.1	0.0	0.0
56	−0.1	−0.1	−0.2	−0.2	−0.2	−0.2	−0.1	0.0	+0.1	+0.2	+0.2	+0.2	+0.2	+0.1
57														
58	−0.3	−0.3	−0.4	−0.3	−0.3	−0.2	−0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.5	+0.5
59	+0.1	−0.1	−0.1	−0.1	−0.1	0.0	0.0	0.0	+0.1	+0.2	+0.2	+0.3	+0.3	+0.3
60	−0.1	−0.1	−0.1	0.0	0.0	0.0	0.0	+0.1	+0.2	+0.3	+0.4	+0.4	+0.4	+0.4
61	−0.1	−0.1	−0.1	−0.1	−0.1	0.0	0.0	+0.1	+0.1	+0.2	+0.2	+0.3	+0.2	+0.2
62														
63	−0.1	0.0	0.0	0.0	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.1
64	+0.2	+0.2	+0.3	+0.2	+0.2	+0.1	0.0	−0.1	−0.1	−0.1	−0.1	−0.1	0.0	0.0
65														
66	−0.3	−0.2	−0.1	−0.1	−0.1	0.0	0.0	0.0	+0.1	+0.2	+0.3	+0.4	+0.4	+0.5
67	−0.4	−0.4	−0.3	−0.2	−0.2	−0.1	0.0	+0.1	+0.3	+0.3	+0.4	+0.5	+0.5	+0.5
68														
69	−0.2	−0.2	−0.1	−0.1	0.0	0.0	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2
70														

Greenwich Mean Civil Time of the Moon's Upper and Lower Transits, and the Equation of Time, 1912.

Day of month.	January.			February.			March.			April.			May.			June.		
	Transit.			Transit.			Transit.			Transit.			Transit.			Transit.		
	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.
	h. m.	m.	m.	h. m.	m.	m.	h. m.	m.	m.	h. m.	m.	m.	h. m.	m.	m.	h. m.	m.	m.
1	(8 49) 21 18	2.4	+ 3.2	(10 45) 23 18	2.8	+13.6	(10 32) 23 01	2.4	+12.6	(11 46)	1.9	+4.0	(11 58)	2.0	−3.0	0 48 (13 14)	2.2	−2.4
2	(9 49) 22 21	2.6	+ 3.7	(11 50)	2.6	+13.8	(11 28) 23 56	2.3	+12.4	0 09 (12 32)	1.9	+3.7	0 22 (12 47)	2.0	−3.1	1 41 (14 07)	2.2	−2.3
3	(10 54) 23 29	2.8	+ 4.2	0 20 (12 50)	2.5	+13.9	..... (12 21)	2.1	+12.1	0 56 (13 19)	1.9	+3.4	1 12 (13 38)	2.1	−3.2	2 33 (14 58)	2.1	−2.1
4	..... (12 03)	2.8	+ 4.6	1 18 (13 45)	2.3	+14.0	0 46 (13 10)	2.0	+11.9	1 43 (14 07)	2.0	+3.1	2 04 (14 30)	2.2	−3.3	3 23 (15 47)	2.0	−1.9
5	0 37 (13 10)	2.8	+ 5.1	2 10 (14 35)	2.1	+14.1	1 33 (13 57)	2.0	+11.7	2 32 (14 57)	2.1	+2.8	2 56 (15 23)	2.2	−3.4	4 10 (16 32)	1.9	−1.8
6	1 42 (14 12)	2.6	+ 5.5	2 59 (15 22)	2.0	+14.2	2 20 (14 43)	1 9	+11.5	3 22 (15 48)	2.1	+2.5	3 49 (16 15)	2.2	−3.5	4 54 (17 16)	1.8	−1.6
7	2 41 (15 08)	2.4	+ 6.0	3 45 (16 08)	1.9	+14.3	3 06 (15 30)	2.0	+11.2	4 14 (16 40)	2.2	+2.2	4 40 (17 05)	2.1	−3.6	5 37 (17 57)	1.7	−1.4
8	3 34 (15 59)	2.1	+ 6.4	4 30 (16 53)	1.9	+14.3	3 54 (16 18)	2.0	+11.0	5 06 (17 32)	2.2	+2.0	5 29 (17 52)	2.0	−3.6	6 18 (18 38)	1.7	−1.2
9	4 23 (16 46)	2.0	+ 6.8	5 16 (17 39)	1.9	+14.4	4 42 (17 07)	2.1	+10.7	5 58 (18 24)	2.1	+1.7	6 15 (18 38)	1.9	−3.7	6 59 (19 20)	1.7	−1.0
10	5 09 (17 31)	1.9	+ 7.3	6 02 (18 26)	2.0	+14.4	5 32 (17 58)	2.1	+10.5	6 48 (19 13)	2.1	+1.4	6 59 (19 21)	1.8	−3.7	7 41 (20 03)	1.8	−0.8
11	5 53 (18 14)	1.8	+ 7.7	6 50 (19 15)	2.0	+14.4	6 24 (18 50)	2.2	+10.2	7 36 (19 59)	2.0	+1.1	7 42 (20 03)	1.8	−3.8	8 26 (20 50)	2.0	−0.6
12	6 36 (18 58)	1.8	+ 8.1	7 40 (20 06)	2.1	+14.4	7 16 (19 41)	2.2	+ 9.9	8 22 (20 24)	1.9	+0.9	8 24 (20 45)	1.8	−3.8	9 15 (21 42)	2.1	−0.4
13	7 21 (19 44)	1.9	+ 8.5	8 31 (20 57)	2.1	+14.4	8 06 (20 31)	2.1	+ 9.7	9 06 (21 27)	1.8	+0.6	9 06 (21 28)	1.8	−3.8	10 09 (22 39)	2.4	−0.2
14	8 07 (20 31)	2.0	+ 8.8	9 22 (21 48)	2.1	+14.4	8 56 (21 20)	2.0	+ 9.4	9 48 (22 10)	1.8	+0.3	9 50 (22 13)	1.9	−3.8	11 10 (23 42)	2.6	0.0
15	8 55 (21 20)	2.0	+ 9.2	10 13 (22 37)	2.1	+14.4	9 43 (22 06)	1.9	+ 9.1	10 31 (22 52)	1.8	+0.1	10 38 (23 03)	2.1	−3.8	..... 12 15	2.7	+0.2
16	9 45 (22 10)	2.1	+ 9.6	11 02 (23 25)	2.0	+14.3	10 28 (22 50)	1.8	+ 8.8	11 14 (23 36)	1.8	−0.1	11 29 (23 57)	2.3	−3.8	(0 48) 13 22	2.8	+0.4
17	10 36 (23 02)	2.1	+ 9.9	11 48	1.9	+14.3	11 12 (23 33)	1.8	+ 8.5	..... 12 00	1.9	−0.4	..... 12 26	2.4	−3.8	(1 54) 14 27	2.7	+0.6
18	11 27 (23 52)	2.1	+10.3	(0 10) 12 32	1.8	+14.2	11 54	1.8	+ 8.3	(0 23) 12 48	2.0	−0.6	(0 57) 13 28	2.6	−3.7	(2 58) 15 27	2.5	+0.8
19	..... 12 17	2.1	+10.6	(0 54) 13 15	1.8	+14.1	(0 15) 12 36	1.8	+ 8.0	(1 14) 13 41	2.2	−0.8	(2 00) 14 33	2.7	−3.7	(3 55) 16 22	2.8	+1.0
20	(0 41) 13 05	2.0	+10.9	(1 38) 13 57	1.7	+14.0	(0 58) 13 20	1.8	+ 7.7	(2 10) 14 39	2.4	−1.1	(3 06) 15 38	2.7	−3.7	(4 48) 17 12	2.1	+1.3
21	(1 28) 13 50	1.9	+11.2	(2 18) 14 39	1.8	+13.9	(1 42) 14 06	1.9	+ 7.4	(3 10) 15 41	2.6	−1.3	(4 09) 16 39	2.6	−3.6	(5 36) 17 59	2.0	+1.5
22	(2 12) 14 34	1.8	+11.5	(3 00) 15 22	1.8	+13.8	(2 30) 14 55	2.0	+ 7.1	(4 12) 16 44	2.6	−1.5	(5 08) 17 36	2.4	−3.5	(6 22) 18 44	1.9	+1.7
23	(2 55) 15 16	1.7	+11.8	(3 45) 16 08	1.9	+13.7	(3 21) 15 48	2.2	+ 6.8	(5 15) 17 46	2.6	−1.7	(6 02) 18 27	2.2	−3.5	(7 07) 19 29	1.9	+1.9
24	(3 36) 15 57	1.7	+12.0	(4 32) 16 58	2.1	+13.6	(4 16) 16 46	2.4	+ 6.5	(6 16) 18 45	2.4	−1.9	(6 52) 19 15	2.0	−3.4	(7 52) 20 14	1.9	+2.1
25	(4 18) 16 39	1.8	+12.3	(5 24) 17 52	2.3	+13.4	(5 16) 17 47	2.6	+ 6.2	(7 12) 19 39	2.3	−2.0	(7 38) 20 01	1.9	−3.3	(8 38) 21 02	2.0	+2.3
26	(5 01) 17 23	1.8	+12.5	(6 22) 18 52	2.5	+13.3	(6 19) 18 50	2.6	+ 5.8	(8 05) 20 29	2.1	−2.2	(8 23) 20 45	1.9	−3.2	(9 26) 21 51	2.1	+2.6
27	(5 47) 18 11	2.0	+12.7	(7 23) 19 55	2.6	+13.1	(7 21) 19 51	2.6	+ 5.5	(8 54) 21 17	2.0	−2.4	(9 08) 21 30	1.9	−3.1	(10 17) 22 42	2.1	+2.8
28	(6 36) 19 03	2.2	+12.9	(8 27) 20 59	2.7	+12.9	(8 21) 20 50	2.4	+ 5.2	(9 40) 22 03	1.9	−2.5	(9 53) 22 17	1.9	−3.0	(11 09) 23 35	2.2	+3.0
29	(7 32) 20 02	2.4	+13.1	(9 31) 22 02	2.6	+12.8	(9 17) 21 44	2.3	+ 4.9	(10 25) 22 48	1.9	−2.7	(10 41) 23 05	2.0	−2.8	..... (12 01)	2.2	+3.2
30	(8 33) 21 05	2.6	+13.3				(10 10) 22 34	2.1	+ 4.6	(11 11) 23 34	1.9	−2.8	(11 30) 23 56	2.1	−2.7	0 27 (12 53)	2.2	+3.4
31	(9 38) 22 12	2.8	+13.5				(10 59) 23 22	2.0	+ 4.3				..... (12 22)	2.2	−2.6			

The lower transits are inclosed in parentheses. In Table 6, 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:42 is 3:42 p. m.

To adapt this table to the local time of another meridian, add the tabular hourly difference for each hour or 15° of west longitude, and subtract the same for east longitude.

The equation of time is for Greenwich apparent noon, and is such that when applied according to sign to apparent time the result is mean time. To change local to standard time add $L-S$ for west longitudes, and subtract the same for east longitudes.

Greenwich Mean Civil Time of the Moon's Upper and Lower Transits, and the Equation of Time, 1912.

Day of month.	July.			August.			September.			October.			November.			December.		
	Transit.			Transit.			Transit.			Transit.			Transit.			Transit.		
	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.	Meridian of Greenwich.	Diff. for 1 hr. of longitude.	Equation of time.
	h. m.	m.	m.	h. m.	m.	m.	h. m.	m.	m.	h. m.	m.	m.	h. m.	m.	m.	h. m.	m.	m.
1	1 18 (13 42)	2.1	+3.6	2 14 (14 34)	1.7	+6.1	2 57 (15 20)	1.8	0.0	3 22 (15 50)	2.3	−10.3	5 16 (17 46)	2.5	−16.3	5 56 (18 21)	2.0	−10.9
2	2 06 (14 29)	1.9	+3.8	2 54 (15 14)	1.7	+6.1	3 43 (16 07)	2.0	− 0.3	4 19 (16 49)	2.5	−10.6	6 14 (18 42)	2.3	−16.4	6 44 (19 08)	2.0	−10.6
3	2 51 (15 13)	1.8	+3.9	3 34 (15 55)	1.7	+6.0	4 32 (16 58)	2.2	− 0.7	5 20 (17 50)	2.6	−10.9	7 08 (19 34)	2.2	−16.4	7 31 (19 54)	1.9	−10.2
4	3 34 (15 55)	1.7	+4.1	4 16 (16 37)	1.8	+5.9	5 26 (17 55)	2.4	− 1.0	6 21 (18 52)	2.6	−11.2	7 59 (20 28)	2.1	−16.4	8 17 (20 40)	1.9	− 9.8
5	4 15 (16 35)	1.7	+4.3	4 59 (17 22)	1.9	+5.8	6 25 (18 56)	2.6	− 1.3	7 22 (19 51)	2.5	−11.5	8 47 (21 10)	2.0	−16.3	9 04 (21 28)	2.0	− 9.3
6	4 55 (17 16)	1.7	+4.5	5 46 (18 11)	2.1	+5.7	7 28 (20 00)	2.7	− 1.6	8 20 (20 47)	2.3	−11.8	9 34 (21 58)	2.0	−16.3	9 53 (22 18)	2.1	− 8.9
7	5 36 (17 57)	1.7	+4.6	6 38 (19 06)	2.3	+5.6	8 31 (21 03)	2.6	− 2.0	9 14 (21 40)	2.2	−12.1	10 21 (22 45)	2.0	−16.3	10 44 (23 11)	2.2	− 8.5
8	6 18 (18 41)	1.8	+4.8	7 35 (20 06)	2.5	+5.5	9 33 (22 03)	2.5	− 2.3	10 05 (22 30)	2.1	−12.4	11 10 (23 35)	2.1	−16.2	11 38	2.3	− 8.1
9	7 04 (19 29)	2.0	+4.9	8 38 (21 11)	2.7	+5.4	10 32 (22 59)	2.4	− 2.7	10 54 (23 18)	2.0	−12.7	..... 12 01	2.1	−16.1	(0 05) 12 33	2.3	− 7.6
10	7 54 (20 22)	2.2	+5.1	9 44 (22 17)	2.8	+5.2	11 26 (23 52)	2.2	− 3.0	11 43	2.0	−12.9	(0 27) 12 54	2.2	−16.0	(1 00) 13 27	2.3	− 7.2
11	8 51 (21 21)	2.5	+5.2	10 49 (23 21)	2.7	+5.1	..... 12 17	2.1	− 3.4	(0 07) 12 31	2.0	−13.2	(1 21) 13 49	2.3	−15.9	(1 54) 14 20	2.2	− 6.7
12	9 53 (22 26)	2.7	+5.4	11 51	2.5	+4.9	(0 42) 13 07	2.1	− 3.7	(0 56) 13 22	2.1	−13.4	(2 16) 14 44	2.3	−15.8	(2 45) 15 09	2.0	− 6.2
13	10 59 (23 33)	2.8	+5.5	(0 20) 12 48	2.4	+4.7	(1 31) 13 55	2.0	− 4.1	(1 47) 14 14	2.2	−13.7	(3 11) 15 38	2.2	−15.7	(3 32) 15 55	1.9	− 5.8
14	..... 12 06	2.8	+5.6	(1 15) 13 41	2.2	+4.6	(2 20) 14 44	2.0	− 4.4	(2 40) 15 07	2.2	−13.9	(4 03) 16 28	2.1	−15.5	(4 17) 16 38	1.8	− 5.3
15	(0 39) 13 10	2.7	+5.7	(2 06) 14 31	2.1	+4.4	(3 09) 15 34	2.1	− 4.8	(3 34) 16 02	2.3	−14.1	(4 53) 17 16	2.0	−15.3	(4 58) 17 18	1.7	− 4.8
16	(1 41) 14 10	2.5	+5.8	(2 55) 15 19	2.0	+4.2	(4 00) 16 26	2.2	− 5.1	(4 29) 16 55	2.2	−14.3	(5 39) 18 01	1.9	−15.2	(5 38) 17 58	1.7	− 4.3
17	(2 37) 15 04	2.2	+5.9	(3 42) 16 06	2.0	+4.0	(4 52) 17 19	2.2	− 5.5	(5 22) 17 47	2.2	−14.6	(6 22) 18 43	1.8	−15.0	(6 18) 18 38	1.7	− 3.8
18	(3 29) 15 53	2.1	+6.0	(4 30) 16 54	2.0	+3.8	(5 45) 18 12	2.2	− 5.8	(6 12) 18 37	2.1	−14.8	(7 08) 19 24	1.7	−14.8	(6 58) 19 19	1.7	− 3.3
19	(4 17) 16 40	2.0	+6.1	(5 18) 17 43	2.1	+3.5	(6 38) 19 04	2.2	− 6.2	(7 00) 19 23	1.9	−14.9	(7 44) 20 04	1.7	−14.6	(7 41) 20 03	1.8	− 2.8
20	(5 04) 17 26	1.9	+6.1	(6 08) 18 34	2.1	+3.3	(7 30) 19 55	2.1	− 6.5	(7 45) 20 07	1.8	−15.1	(8 24) 20 45	1.7	−14.3	(8 26) 20 51	2.0	− 2.3
21	(5 49) 18 12	1.9	+6.2	(7 00) 19 26	2.2	+3.1	(8 19) 20 43	2.0	− 6.9	(8 28) 20 48	1.7	−15.3	(9 06) 21 28	1.8	−14.1	(9 17) 21 45	2.2	− 1.8
22	(6 36) 18 59	2.0	+6.2	(7 52) 20 19	2.2	+2.8	(9 06) 21 28	1.9	− 7.2	(9 09) 21 29	1.7	−15.4	(9 50) 22 14	1.9	−13.8	(10 14) 22 44	2.5	− 1.4
23	(7 24) 19 48	2.0	+6.3	(8 45) 21 10	2.1	+2.6	(9 50) 22 11	1.8	− 7.6	(9 49) 22 10	1.7	−15.6	(10 39) 23 05	2.1	−13.5	(11 15) 23 48	2.6	− 0.9
24	(8 13) 20 39	2.1	+6.3	(9 35) 22 00	2.1	+2.3	(10 32) 22 52	1.7	− 7.9	(10 31) 22 52	1.8	−15.7	(11 38)	2.3	−13.3	..... (12 20)	2.7	− 0.4
25	(9 05) 21 31	2.2	+6.3	(10 24) 22 47	2.0	+2.0	(11 13) 23 33	1.7	− 8.3	(11 14) 23 36	1.8	−15.8	0 02 (12 32)	2.5	−13.0	0 53 (13 25)	2.7	+ 0.1
26	(9 57) 22 23	2.2	+6.3	(11 09) 23 31	1.8	+1.8	(11 53)	1.7	− 8.6	..... (12 00)	2.0	−16.0	1 02 (13 34)	2.6	−12.7	1 57 (14 27)	2.6	+ 0.6
27	(10 49) 23 14	2.1	+6.3	(11 52)	1.8	+1.5	0 14 (12 35)	1.7	− 9.0	0 24 (12 50)	2.1	−16.0	2 06 (14 38)	2.6	−12.3	2 56 (15 24)	2.4	+ 1.1
28	(11 39)	2.0	+6.3	0 13 (12 34)	1.7	+1.2	0 56 (13 18)	1.8	− 9.3	1 16 (13 44)	2.3	−16.1	3 09 (15 40)	2.5	−12.0	3 51 (16 17)	2.2	+ 1.6
29	0 03 (12 26)	2.0	+6.3	0 54 (13 14)	1.7	+0.9	1 41 (14 04)	1.9	− 9.6	2 13 (14 43)	2.5	−16.2	4 09 (16 38)	2.3	−11.7	4 42 (17 06)	2.0	+ 2.1
30	0 49 (13 11)	1.9	+6.2	1 34 (13 54)	1.7	+0.6	2 29 (14 55)	2.1	−10.0	3 14 (15 44)	2.6	−16.3	5 05 (17 31)	2.1	−11.3	5 29 (17 52)	2.0	+ 2.6
31	1 33 (13 54)	1.8	+6.2	2 15 (14 36)	1.7	+0.3				4 16 (16 46)	2.6	−16.3				6 15 (18 38)	1.9	+ 3.1

The lower transits are inclosed in parentheses. In Table 6, 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:42 is 3:42 p. m.

To adapt this table to the local time of another meridian, add the tabular hourly difference for each hour or 15° of west longitude, and subtract the same for east longitude.

The equation of time is for Greenwich apparent noon, and is such that when applied according to sign to apparent time the result is mean time. To change local to standard time add $L—S$ for west longitudes, and subtract the same for east longitudes.

Greenwich Mean Civil Time of the Moon's Phases, Apogee and Perigee.

Moon's Phases, 1912.				Moon in—	
● New Moon.	☽ First Quarter.	○ Full Moon.	☾ Last Quarter.	Apogee.	Perigee.
mo. d. h. m.	*mo. d. h. m.*	*mo. d. h. m.*	*mo. d. h. m.*	*mo. d. h.*	*mo. d. h.*
. . . . .	. . . . .	Jan. 4 13 29.7	Jan. 11 7 42.9	. . . . .	Jan. 4 13.7
Jan. 19 11 10.0	Jan. 27 8 51.4	Feb. 2 23 58.1	Feb. 10 0 50.8	Jan. 18 1.9	Feb. 2 2.3
Feb. 18 5 44.1	Feb. 25 19 26.7	Mar. 3 10 41.9	Mar. 10 19 55.6	Feb. 14 11.0	Mar. 1 9.0
Mar. 18 22 8.7	Mar. 26 3 1.9	Apr. 1 22 4.6	Apr. 9 15 23.8	Mar. 13 4.7	Mar. 28 21.0
Apr. 17 11 40.2	Apr. 24 8 47.2	May 1 10 19.4	May 9 9 56.1	Apr. 10 0.8	Apr. 22 22.3
May 16 22 13.6	May 23 14 11.3	May 30 23 29.6	June 8 2 35.6	May 7 20.0	May 19 16.6
June 15 6 23.6	June 21 20 38.9	June 29 13 33.8	July 7 16 46.9	June 4 12.9	June 16 16.5
July 14 13 13.2	July 21 5 18.4	July 29 4 28.2	Aug. 6 4 17.6	July 2 0.6	July 15 0.0
Aug. 12 19 57.6	Aug. 19 16 56.6	Aug. 27 19 58.9	Sept. 4 13 23.1	July 29 4.8	Aug. 12 9.6
Sept. 11 3 48.5	Sept. 18 7 54.7	Sept. 26 11 34.2	Oct. 3 20 48.1	Aug. 25 8.6	Sept. 9 18.3
Oct. 10 13 40.6	Oct. 18 2 6.2	Oct. 26 2 30.5	Nov. 2 3 37.6	Sept. 21 20.3	Oct. 7 18.8
Nov. 9 2 4.8	Nov. 16 22 43.3	Nov. 24 16 12.2	Dec. 1 11 4.8	Oct. 19 14.0	Nov. 3 10.9
Dec. 8 17 6.7	Dec. 16 20 6.5	Dec. 24 4 30.1	Dec. 30 20 11.9	Nov. 16 10.5	Nov. 28 10.7
. . . . .	. . . . .	. . . . .	. . . . .	Dec. 14 7.2	Dec. 26 2.8

In the above table 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:42 is 3:42 p. m.

This table may be adapted to any other meridian than Greenwich by adding the longitude in time when it is east, and subtracting it when west.

TABLE 8.—MOON'S DECLINATION, 1912.

Greenwich Mean Civil Time of the Moon's greatest Declination North and South and Passage over the Equator.

Moon on Equator.	Moon Farthest North.		Moon on Equator.	Moon Farthest South.	
Time.	Time.	Declination.	Time.	Time.	Declination.
mo. d. h. m.	*mo. d. h. m.*	° ′	*mo. d. h. m.*	*mo. d. h. m.*	° ′
. . . . .	Jan. 4 0 21	27 59	Jan. 10 3 42	Jan. 17 10 58	28 00
Jan. 24 21 38	Jan. 31 10 36	28 05	Feb. 6 12 06	Feb. 13 16 36	28 10
Feb. 21 2 31	Feb. 27 18 37	28 16	Mar. 4 22 16	Mar. 11 23 32	28 21
Mar. 19 8 57	Mar. 26 0 29	28 24	Apr. 1 8 04	Apr. 8 7 35	28 26
Apr. 15 17 13	Apr. 22 5 55	28 25	Apr. 28 15 48	May 5 15 42	28 23
May 13 2 12	May 19 12 43	28 20	May 25 21 20	June 1 22 49	28 17
June 9 10 27	June 15 21 23	28 16	June 22 2 08	June 29 4 37	28 15
July 6 17 06	July 13 7 12	28 17	July 19 8 13	July 26 9 41	28 19
Aug. 2 22 27	Aug. 9 16 44	28 25	Aug. 15 16 39	Aug. 22 15 08	28 29
Aug. 30 3 40	Sept. 6 0 42	28 34	Sept. 12 2 52	Sept. 18 21 53	28 37
Sept. 26 9 57	Oct. 3 6 46	28 38	Oct. 9 13 02	Oct. 16 5 59	28 38
Oct. 23 17 41	Oct. 30 12 05	28 35	Nov. 5 21 08	Nov. 12 14 32	28 32
Nov. 20 2 09	Nov. 26 18 37	28 28	Dec. 3 2 36	Dec. 9 22 15	28 25
Dec. 17 10 04	Dec. 24 3 25	28 24	Dec. 30 7 11	. . . . .	. . . . .

In the above table 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:42 is 3:42 p. m.

This table may be adapted to any other meridian than Greenwich by adding the longitude in time when it is east, and subtracting it when west.

TABLE 9.—CURRENTS.

These current tables are restricted to portions of the Atlantic and Pacific coasts of the United States and adjacent territory. The bearings and directions are true—that is, not magnetic—and all distances are in nautical miles. The matter in these tables is given in one of the five following forms:

1. Current diagrams are given for the seven following localities:

	Page.
Georges Bank, from Nantucket Shoals to Cape Sable	471
Boston Harbor, Massachusetts	477
Nantucket and Vineyard sounds	481
East River, New York	489
New York entrance, by way of Sandy Hook	493
Delaware Bay	497
Chesapeake Bay	501

These diagrams were made according to a plan devised jointly in 1894 by Lieut. E. H. Tillman, U. S. Navy, assistant, Coast and Geodetic Survey, and Capt. John Ross, nautical expert, of the same Survey. The diagram for Georges Bank contains both direction and velocity of the current for any time, but the other diagrams give merely the velocity, as the direction is assumed to be fixed by the banks or shoals along the course.

2. Tables in which the direction and velocity of the current are given for each hour of the tide at some reference station. These tables are distributed as follows:

	Page.
20 stations in Bay of Fundy, referred to St. John, N. B	468
7 stations in Portsmouth Harbor, referred to Portland, Maine	472
17 stations in Boston Harbor, referred to Boston, Massachusetts	473
3 stations off Chatham Lights, referred to Boston, Massachusetts	474
2 stations in Long Island Sound, referred to New London, Connecticut	483
4 stations in Arthur Kill, referred to Sandy Hook, New Jersey	484
4 stations in Newark Bay, referred to New York, New York	485
3 stations in Kill van Kull, referred to New York, New York	485

The direction of the current is given on the upper line and the velocities, in knots, on the lower line for each station.

3. Some general remarks are given about the currents in the following localities:

	Page.
Currents off Cape Cod Peninsula	474
Currents in Block Island Sound	483
Currents in Long Island Sound	483
Currents in East River, New York	483
Currents in Hudson River, New York	486

4. The predicted time of the slack waters for every day in the year are given for the two following stations:

	Page.
Seymour Narrows, British Columbia	504
Sergius Narrows, Alaska	508

5. Brief directions are given for obtaining slack waters at the 10 following stations in Georgia Strait, British Columbia, and in Alaska:

	Page.		Page.
Race Passage	513	Burrard Inlet	513
East Point	513	Yuculta Rapids	514
Active Pass	513	Hole in the Wall	514
Portier Pass	513	Seechelt Rapids	514
Dodd Narrows	513	Chatham Strait	514

HIGH WATER.							LOW WATER.						
Hours before.			Hours after.				Hours before.			Hours after.			
3	2	1	0	1	2	3	3	2	1	0	1	2	3
Current stations in the Lower Part of Bay of Fundy, referred to time of tide at St. John, N. B. See pp. 61-64.													
Station (1)			Off Shelburne Harbor; 11 miles S. 70° E. of Cape Roseway Light.										
S 50° W	N 50° E	N 50° E	N 50° E	N 50° E	N 50° E	N 50° E	N 50° E	S 50° W	S 50° W	S 50° W	S 50° W	S 50° W	S 50° W
0.2	0.2	0.4	0.6	0.6	0.4	0.2	0.1	0.2	0.4	0.6	0.6	0.4	0.2
Station (2)			Off Negro Harbor; 6 miles East of Brazil Rock.										
S 70° W	N 70° E	N 70° E	N 70° E	N 70° E	N 70° E	N 70° E	N 70° E	S 70° W	S 70° W	S 70° W	S 70° W	S 70° W	S 70° W
0.4	0.2	0.7	1.1	1.1	0.9	0.5	0.3	0.2	0.7	1.1	1.1	0.9	0.5
Station (3)			Off Cape Sable; 10 miles South of Cape Sable.										
N 80° W	N 80° W	S 80° E	S 80° E	S 80° E	S 80° E	S 80° E	S 80° E	S 80° E	N 80° W	N 80° W	N 80° W	N 80° W	N 80° W
1.0	0.2	0.5	1.1	1.5	1.5	1.1	1.0	0.2	1.0	1.2	1.5	1.5	1.1
Station (4)			Off Cape Sable; 12 miles S. 25° E. from Seal Island Light.										
N 60° W	N 60° W	N 60° W	S 60° E	S 60° E	S 60° E	S 60° E	S 60° E	S 60° E	. . .	N 60° W	N 60° W	N 60° W	N 60° W
1.7	1.1	0.1	0.9	1.7	2.0	1.9	1.7	1.0	0.0	1.0	1.6	2.0	1.8
Station (5)			Entrance to Bay of Fundy; 12 miles S. 55° W. from Seal Island Light.										
N 30° W	N 30° W	N 30° W	S 30° E	S 30° E	S 30° E	S 30° E	S 30° E	S 30° E	S 30° E	N 30° W	N 30° W	N 30° W	N 30° W
1.9	1.5	0.8	0.2	1.2	1.8	1.9	1.9	1.4	0.7	0.2	1.1	1.7	1.9
Station (6)			Entrance to Bay of Fundy; 12 miles N. 67° W. from Seal Island Light.										
N 25° W	N 25° W	N 25° W	N 25° W	S 25° E	S 25° E	S 25° E	S 25° E	S 25° E	S 25° E	S 25° E	N 25° W	N 25° W	N 25° W
1.6	1.5	0.9	0.3	0.5	1.2	1.6	1.6	1.5	1.0	0.2	0.6	1.2	1.6
Station (7)			Off Yarmouth; 13 miles S. 56° W. from Cape Forchu Light.										
N 15° W	N 15° W	N 15° W	N 15° W	S 15° E	S 15° E	S 15° E	S 15° E	S 15° E	S 15° E	S 15° E	N 15° W	N 15° W	N 15° W
1.5	1.4	1.0	0.3	0.4	1.1	1.5	1.5	1.4	1.0	0.3	0.5	1.2	1.5
Station (8)			Off Lurcher Shoal; 7 miles West of Lurcher Shoal.										
N 5° W	N 5° W	N 5° W	N 5° W	S 5° E	S 5° E	S 5° E	S 5° E	S 5° E	S 5° E	S 5° E	N 5° W	N 5° W	N 5° W
1.7	1.0	1.2	0.4	0.4	1.1	1.6	1.7	1.6	1.2	0.4	0.4	1.2	1.6
Station (9)			West of Cape St. Mary; 12 miles S. 40° W. from Bryer Island Light.										
North	North	North	North	South	South	South	South	South	South	South	North	North	North
2.0	1.9	1.4	0.6	0.4	1.3	1.9	2.0	1.9	1.4	0.5	0.5	1.4	1.9
Station (10)			West of Northwest Ledge; 7 miles N. 50° W. from Bryer Island Light.										
N 15° E	N 15° E	N 15° E	N 15° E	S 15° W	S 15° W	S 15° W	S 15° W	15° W	S 15° W	S 15° W	N 15° E	N 15° E	N 15° E
2.4	2.3	1.7	0.8	0.4	1.5	2.3	2.3	2.4	1.7	0.6	0.5	1.6	2.3
Station (11)			Northwest of Petit Passage; 10 miles N. 45° W. from Petit Passage Light.										
N 25° E	N 25° E	N 25° E	N 25° E	S 25° W	S 25° W	S 25° W	S 25° W	S 25° W	S 25° W	S 25° W	N 25° E	N 25° E	N 25° E
2.3	2.3	1.8	0.8	0.5	1.5	2.3	2.3	2.4	1.7	0.7	0.4	1.5	2.3

HIGH WATER.							LOW WATER.						
Hours before.			Hours after.				Hours before.			Hours after.			
3	2	1	0	1	2	3	3	2	1	0	1	2	3
Current stations in the Lower Part of Bay of Fundy, referred to time of tide at St. John, N. B.—Continued.													
Station (12) West of Digby Gut; 20 miles N. 85° W. from Prim Point Light.													
N 45° E	N 45° E	N 45° E	N 45° E	S 45° W	S 45° W	S 45° W	S 45° W	S 45° W	S 45° W	S 45° W	N 45° E	N 45° E	N 45° E
1.9	2.0	1.5	0.7	0.2	1.2	1.8	1.9	2.0	1.5	0.7	0.3	1.3	1.8
Station (13) Northwesterly from Digby Gut; 17 miles N. 40° W. from Prim Point Light.													
N 50° E	N 50° E	N 50° E	N 50° E	S 50° W	S 50° W	S 50° W	S 50° W	S 50° W	S 50° W	S 50° W	N 50° E	N 50° E	N 50° E
1.6	1.7	1.3	0.6	0.2	0.9	1.5	1.6	1.7	1.4	0.6	0.2	1.0	1.6
Station (14) Southerly from Cape Spencer; 10 miles S. 20° E. from Cape Spencer Light.													
N 55° E	N 55° E	N 55° E	N 55° E	S 55° W	S 55° W	S 55° W	S 55° W	S 55° W	S 55° W	S 55° W	N 55° E	N 55° E	N 55° E
1.5	1.6	1.3	0.6	0.2	0.9	1.5	1.6	1.6	1.4	0.6	0.2	1.0	1.5
Station (15) Easterly from Cape Spencer; 14 miles East from Cape Spencer Light.													
N 55° E	N 55° E	N 55° E	N 55° E	S 55° W	S 55° W	S 55° W	S 55° W	S 55° W	S 55° W	S 55° W	N 55° E	N 55° E	N 55° E
1.5	1.6	1.3	0.7	0.2	0.9	1.4	1.4	1.5	1.3	0.6	0.2	0.9	1.4
Station (16) Grand Passage; in channel off Westport.													
N 15° W	N 15° W	N 15° W	S 15° E	S 15° E	S 15° E	S 15° E	S 15° E	S 15° E	S 15° E	N 15° W	N 15° W	N 15° W	N 15° W
5.4	4.1	1.8	0.8	3.4	5.1	5.5	5.4	4.2	1.9	0.9	3.3	5.1	5.5
Station (17) Petit Passage; in middle of passage.													
North	North	North	. . .	South	South	South	South	South	South	. . .	North	North	North
6.5	5.5	3.0	0.0	3.0	5.6	6.5	6.5	5.6	3.3	0.0	3.3	5.6	6.5
Station (18) Digby Gut; middle of channel east of Man of War Rock.													
N 30° W	N 30° W	N 30° W	N 30° W	S 30° E	S 30° E	S 30° E	S 30° E	S 30° E	S 30° E	S 30° E	N 30° W	N 30° W	N 30° W
4.5	3.9	2.4	0.4	1.9	3.6	4.5	4.5	4.0	2.5	0.4	1.7	3.7	4.5
Station (19) South entrance to Grand Manan Passage; 6 miles N. 60° W. from from S. W. Head Light.													
N 35° E	N 35° E	N 35° E	N 35° E	S 35° W	S 35° W	S 35° W	S 35° W	S 35° W	S 35° W	S 35° W	N 35° E	N 35° E	N 35° E
2.1	2.2	1.6	0.7	0.4	1.4	2.0	2.1	2.2	1.6	0.7	0.4	1.4	2.0
Station (20) North entrance to Grand Manan Passage; 3 miles east of West Quoddy Head Light.													
N 30° E	N 30° E	N 30° E	N 30° E	S 30° W	S 30° W	S 30° W	S 30° W	S 30° W	S 30° W	S 30° W	N 30° E	N 30° W	N 30° W
2.3	2.2	1.7	0.8	0.4	1.5	2.1	2.2	2.2	1.7	0.8	0.4	1.5	2 2

The values in the above table were obtained by an adjustment of data from the Canadian Current Tables for the Bay of Fundy and some matter published by the United States Navy. The change of even a few miles in position may make a marked difference in the character of the current. At station (1) the movement is weak and irregular, while at all the stations wind is liable to cause temporary irregularities.

Explanation of Current Diagram, Georges Bank.

The diagram on the opposite page represents only average conditions of the currents at 14 stations along a curved line extending from the southern part of Nova Scotia to the Nantucket Shoals light vessel, the scale being too small to show details. The line may be defined as the arc of a circumference passing through Nantucket Shoals light vessel (lat. 40° 37′ N., long. 69° 37′ W.), with its center at Bath, Maine. The stations represented are approximately 20 miles apart, and No. 14 is at Nantucket Shoals light vessel.

The observations upon which the diagram is based are insufficient to give any but roughly approximate results, which it is hoped, however, will be near enough to the facts to be of service to the mariner.

On the diagram the currents flowing into the Gulf of Maine are designated as "Flood" currents, and those flowing from it as "Ebb" currents.

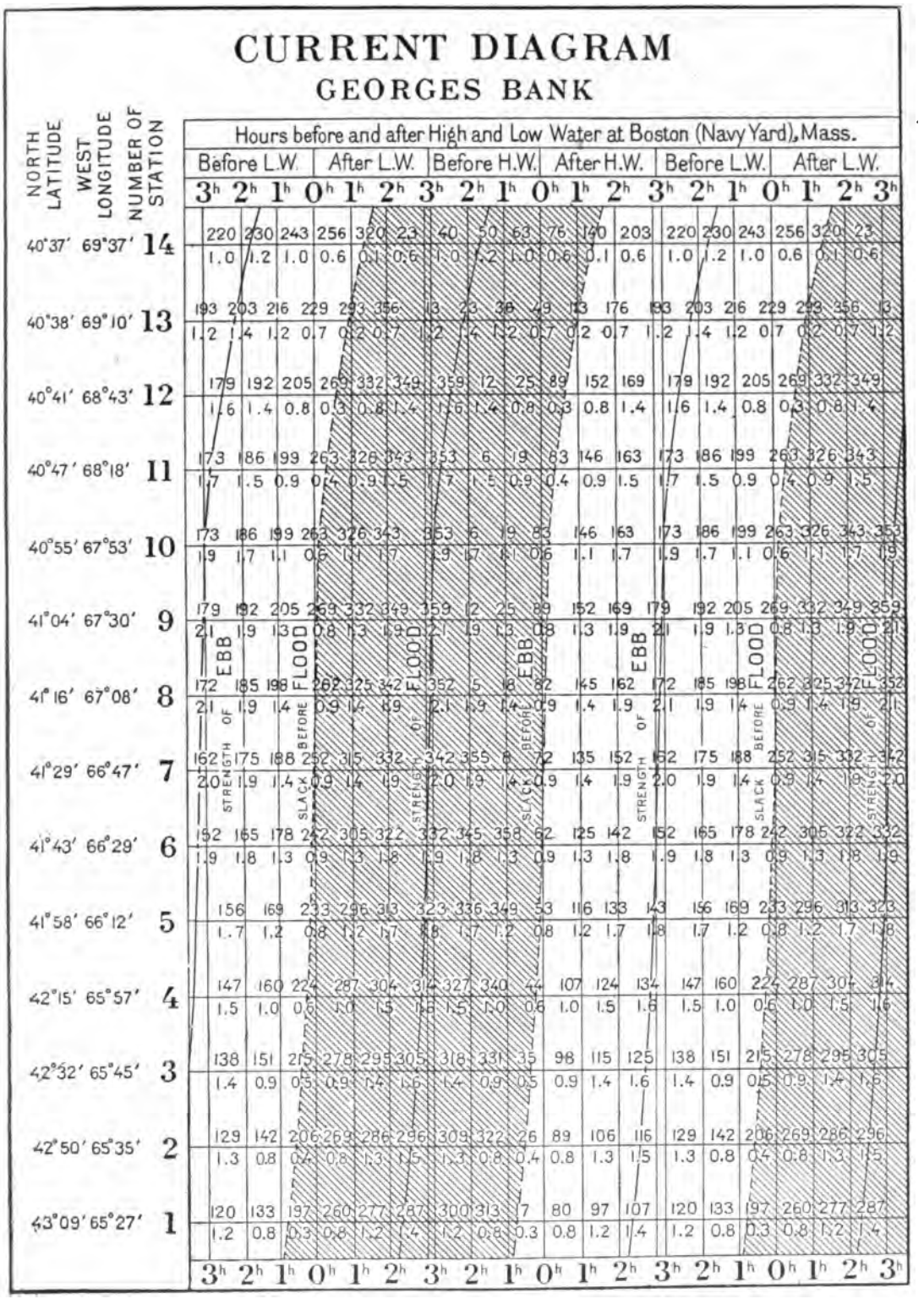
The direction and the velocity of the currents are indicated by the small figures within the diagram. The upper numbers represent the direction in degrees of azimuth reckoned from the north toward the east. In this system N=0°, E=90°, S=180°, and W=270°. The lower numbers represent the velocity in knots.

Example 1.—A vessel in latitude 42° 55′ N. and longitude 65° 30′ W. is about to enter the Gulf of Maine at 10 a. m. on a day when low water occurs at Boston at 7:40 a. m.; what is the direction and velocity of the current? On the diagram we find that station No. 2 is the one nearest to the location of the vessel. The time being 10:00 — 7:40 = 2:20, or 2⅓ hours after low water, on the horizontal line representing station No. 2 find a point ⅓ the distance between the vertical lines indicating 2 hours and 3 hours after low water. The diagram shows that both the direction and the velocity of the current at this time are changing slowly, and consequently it will be sufficiently accurate to take the nearest numbers for the results. In this case the direction of the current is indicated by an azimuth of 296°, which, being between 270° and 360°, is equivalent to N. (360° — 296°) W., or N. 64° W., and the velocity is approximately 1.5 knots, the current being favorable to the vessel.

Example 2.—A vessel is in latitude 40° 40′ N. and longitude 68° 55′ W. at 2 p. m. on a day when high water occurs at Boston at 1 p. m.; what is the direction and velocity of the current? In this case No. 12 is the nearest station. By locating a point on the diagram, on the line of station 12, for 1 hour after high water, we find that both the azimuth and velocity are here shifting more rapidly than near the times of strength of flood or ebb, the direction changing from 89° to 152° in about an hour. A rough interpolation gives us 110°, which, being between 90° and 180°, is equivalent to S. (180° — 110°) E., or S. 70° E., as the direction, and 0.5 knot as the velocity of the current at this time, but near the times of slack the directions and velocities are quite irregular.

CURRENT DIAGRAM

GEORGES BANK



HIGH WATER.							LOW WATER.						
Hours before.			Hours after.				Hours before.			Hours after.			
3	2	1	0	1	2	3	3	2	1	0	1	2	3
Current stations in Portsmouth Harbor, referred to time of tide at Portland, Maine. *See* pp. 65–68.													
Station (1)			Outer entrance to harbor, 0.3 mile S. 77° W. from Whaleback Light.										
N 5° W	N 4° W	N 3° W	N 2° W	N 1° W	N	S 12° W	S 12° W	S 14° W	S 15° W	S 16° W	S 17° W	S 18° W	N 5° W
0.2	0.8	1.0	0.8	0.5	0.1	0.4	0.7	1.4	1.4	1.1	0.8	0.4	0.1
Station (2)			In mid-channel 0.2 mile S. 78° E. from Portsmouth Harbor Light.										
N 28° W	N 20° W	N 12° W	N 6° W	N 2° W	N 7° W	S	S 2° E	S 11° E	S 18° E	S 17° E	S 7° W	S 3° W	N 32° W
0.3	0.8	1.1	1.1	0.8	0.1	0.5	0.7	1.3	1.4	1.1	0.7	0.1	0.2
Station (3)			In mid-channel 0.3 mile N. 5° W. from Portsmouth Harbor Light.										
W	N 79° W	N 63° W	N 58° W	N 45° W	. . .	S 72° E	S 70° E	S 65° E	S 66° E	S 74° E	S 85° E	N 88° E	S 87° W
0.6	1.5	1.9	1.7	1.0	0.0	1.1	1.3	2.2	2.7	2.4	1.4	0.6	0.3
Station (4)			About 0.4 mile N. 25° W. from Portsmouth Harbor Light.										
S 71° W	S 77° W	S 83° W	S 89° W	N 86° W	N 80° W	N 55° E	N 57° E	N 64° E	N 69° E	N 69° E	N 65° E	N 58° E	S 70° W
0.6	1.4	1.6	1.4	1.0	0.4	0.2	0.3	0.6	0.9	1.1	1.1	0.6	0.2
Station (5)			In mid-channel south from Clark Island.										
S 88° W	S 86° W	S 84° W	S 83° W	S 81° W	S 79° W	N 81° E	N 82° E	N 84° E	N 84° E	N 83° E	N 79° E	N 73° E	S 89° W
1.0	1.7	1.7	1.4	1.0	0.4	0.7	1.1	2.4	2.3	1.7	1.0	0.4	0.6
Station (6)			In mid-channel off Goat Island Ledge buoy.										
S 88° W	S 87° W	S 86° W	S 85° W	S 84° W	S 83° W	N 88° E	N 88° E	N 87° E	N 86° E	N 85° E	N 84° E	N 83° E	S 89° W
1.3	2.0	2.0	1.5	1.0	0.4	0.7	1.1	2.2	2.4	1.9	1.1	0.3	1.0
Station (7)			About 0.2 mile south from Portsmouth Navy-Yard.										
N 43° W	N 45° W	N 48° W	N 55° W	N 52° W	N 55° W	S 55° E	S 54° E	S 49° E	S 45° E	S 43° E	S 44° E	S 45° E	N 42° W
1.8	2.9	3.1	2.9	2.0	0.9	0.5	0.9	1.9	2.8	2.6	1.8	0.6	1.5

HIGH WATER.							LOW WATER.						
Hours before.			Hours after.				Hours before.			Hours after.			
3	2	1	0	1	2	3	3	2	1	0	1	2	3
Current stations in Boston Harbor, referred to time of tide at Boston, Mass. *See* pp. 69–72.													
Station (1)			South Channel, 1.2 miles N. 85° E. from Deer Island Light.										
S 75° W	S 76° W	S 76° W	S 77° W	N 59° E	N 61° E	N 63° E	N 63° E	N 64° E	N 64° E	N 65° E	S 70° W	S 75° W	S 75° W
1.5	1.3	0.9	0.1	0.8	1.5	1.8	1.8	1.8	1.4	0.1	0.9	1.4	1.5
Station (2)			North Channel, 1.5 miles N. 68° E. from Deer Island Light.										
S 37° W	S 42° W	S 46° W	S 50° W	N 57° E	N 49° E	N 47° E	N 47° E	N 52° E	N 63° E	N 81° E	S 30° W	S 33° W	S 36° W
0.9	0.8	0.6	0.3	0.4	0.7	0.9	0.9	0.8	0.5	0.1	0.5	0.7	0.9
Station (3)			Broad Sound, 1.0 mile N. 57° W. from Green Island.										
S 49° W	S 57° W	S 64° W	S 72° W	N 5° E	N 15° E	N 19° E	N 19° E	N 15° E	N 5° E	S 24° W	S 32° W	S 40° W	S 48° W
0.8	0.6	0.3	0.1	0.4	0.6	0.5	0.5	0.3	0.1	0.4	0.6	0.8	0.9
Station (4)			Broad Sound, 0.8 mile S. 71° E. from Winthrop Head.										
S 26° W	S 33° W	S 42° W	N 8° E	N 22° E	N 31° E	N 49° E	N 41° E	N 48° E	N 58° E	S 43° W	S 29° W	S 20° W	S 22° W
0.7	0.4	0.1	0.1	0.3	0.4	0.5	0.5	0.4	0.2	0.1	0.4	0.6	0.7
Station (5)			Broad Sound, 1.5 miles N. 60° E. from Winthrop Head.										
S 13° W	S 10° W	S 3° E	. . .	S 70° E	S 86° E	N 80° E	N 78° E	N 72° E	S 82° E	S 16° E	S 4° E	S 6° W	S 13° W
0.4	0.4	0.3	0.0	0.2	0.3	0.4	0.4	0.2	0.1	0.1	0.2	0.3	0.4
Station (6)			Broad Sound, near Lynn Harbor, 0.4 mile N. 86° W. from Bass Point.										
N 31° W	N 22° W	N 9° W	S 74° E	S 74° E	S 69° E	S 60° E	S 58° E	S 51° E	S 42° E	N 66° W	N 56° W	N 43° W	N 33° W
0.4	0.3	0.1	0.1	0.2	0.3	0.4	0.4	0.3	0.1	0.2	0.4	0.5	0.4
Station (7)			Broad Sound, 0.5 mile S. 27° E. from East Point, Nahant.										
S 87° W	S 88° W	S 85° W	N 75° E	N 69° E	N 58° E	N 53° E	N 53° E	N 53° E	N 68° E	S 67° W	S 72° W	S 81° W	S 85° W
0.3	0.2	0.1	0.1	0.2	0.4	0.4	0.4	0.3	0.1	0.2	0.4	0.4	0.3
Station (8)			Broad Sound, 1.2 miles N. 27° W. from The Graves.										
S 73° W	S 64° W	S 16° W	N 89° E	N 76° E	N 66° E	N 63° E	N 62° E	N 63° E	N 67° E	N 89° E	S 60° W	S 69° W	S 78° W
0.4	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.1	0.2	0.3	0.4
Station (9)			Broad Sound, 0.2 mile N. 15° E. from Green Island.										
S 85° W	S 77° W	S 65° W	S 76° E	S 88° E	N 81° E	N 69° E	N 65° E	N 50° E	N 33° E	N 89° W	N 88° W	W	S 86° W
0.7	0.6	0.2	0.2	0.5	0.8	0.8	0.7	0.5	0.1	0.1	0.4	0.6	0.7
Station (10)			Hypocrite Channel, 0.6 mile N. from east end of Outer Brewster.										
S 39° W	S 42° W	S 45° W	N 60° E	N 59° E	N 59° E	N 60° E	N 60° E	N 62° E	N 65° E	S 60° W	S 55° W	S 43° W	S 39° W
1.1	0.8	0.4	0.1	0.6	1.0	1.1	1.1	0.8	0.3	0.1	0.6	1.0	1.1
Station (11)			Hypocrite Channel, 0.6 mile N. 35° E. from east end of Outer Brewster.										
S 48° W	S 52° W	S 56° W	S 78° E	S 72° E	S 68° E	S 65° E	S 65° E	S 67° E	S 70° E	S 73° E	S 26° W	S 38° W	S 46° W
0.4	0.4	0.2	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.1	0.2	0.4	0.4

HIGH WATER.							LOW WATER.						
Hours before.			Hours after.				Hours before.			Hours after.			
3	2	1	0	1	2	3	3	2	1	0	1	2	3
Current stations in Boston Harbor, referred to time of tide at Boston, Mass.—Continued.													
Station (12)			Hypocrite Channel, 0.2 mile W. from west end of Outer Brewster.										
S 67° W	S 82° W	N 83° W	N 80° E	N 26° E	N 9° W	N 18° W	N 20° W	N 21° W	. . .	N 76° W	S 72° W	S 61° W	S 68° W
0.5	0.3	0.1	0.2	0.3	0.3	0.3	0.3	0.1	0.0	0.3	0.4	0.5	0.5
Station (13)			Hypocrite Channel, 0.1 mile N. 30° W. from Little Calf Island.										
S 78° W	S 82° W	S 80° W	N 52° E	N 58° E	N 61° E	N 60° E	N 59° E	N 52° E	N 41° E	S 66° W	S 70° W	S 73° W	S 77° W
0.9	0.7	0.4	0.4	1.0	1.2	1.1	1.0	0.7	0.3	0.1	0.7	0.9	0.9
Station (14)			Hypocrite Channel, 0.2 mile W. from north end of Calf Island.										
S 32° W	S 28° W	S 24° W	N 38° E	N 29° E	N 26° E	N 28° E	N 29° E	N 36° E	N 40° E	S 57° W	S 48° W	S 40° W	S 33° W
0.9	0.8	0.5	0.1	0.5	0.6	0.6	0.6	0.5	0.3	0.2	0.7	0.9	0.9
Station (15)			Midway between Calf and Great Brewster Islands.										
S 63° W	S 66° W	S 78° W	N 76° E	N 74° E	N 72° E	N 70° E	N 69° E	N 67° E	N 65° E	S 77° W	S 67° W	S 64° W	S 68° W
1.1	0.9	0.3	0.7	0.9	0.9	0.8	0.8	0.6	0.1	0.4	0.9	1.1	1.1
Station (16)			East of Great Brewster Island, 0.5 mile N. 44° E. from Boston Light.										
S 66° W	S 70° W	S 78° W	N 37° E	N 60° E	E	S 73° E	S 69° E	S 58° E	. . .	S 53° W	S 57° W	S 61° W	S 65° W
0.6	0.5	0.2	0.1	0.4	0.4	0.3	0.3	0.1	0.0	0.2	0.4	0.5	0.6
Station (17)			Black Rock Channel, 0.1 mile N. 25° W. from Narrows Light.										
S 33° W	S 30° W	S 29° W	N 44° E	N 49° E	N 53° E	N 58° E	N 59° E	N 62° E	N 64° E	S 35° W	S 45° W	S 39° W	S 34° W
1.3	1.0	0.3	0.1	0.6	0.8	0.9	0.9	0.8	0.5	0.1	0.6	1.1	1.3

Current stations off Chatham Lights, referred to time of tide at Boston, Mass. See pp. 69–72.													
Station (1)			About 8.5 miles N. 87° E. from Chatham Lights.										
N 4° W	S 30° W	S 17° W	S 10° W	S 9° W	S 13° W	S 15° W	S 18° W	S 22° W	N 28° E	N 24° E	N 14° E	N 5° E	N 4° W
0.2	0.2	0.6	0.8	0.9	0.8	0.6	0.5	0.2	0.1	0.3	0.4	0.3	0.2
Station (2)			About 3.6 miles N. 87° E. from Chatham Lights.										
N 30° W	S 40° W	S 35° W	S 30° W	S 20° W	S 6° W	. . .	N 33° E	N 24° E	N 10° E	N	N 15° W	N 22° W	N 29° W
0.2	0.6	0.9	0.7	0.4	0.1	0.0	0.1	0.4	0.7	0.9	1.0	0.7	0.3
Station (3)			About 4.9 miles S. 54° E. from Chatham Lights.										
N 7° E	S 16° W	S 11° W	S 5° W	S 9° W	S 16° W	. . .	. . .	N 12° E	N 11° E	N 10° E	N 9° E	N 8° E	N 7° E
0.1	0.3	0.9	1.2	1.0	0.4	0.0	0.0	0.2	0.7	1.0	0.9	0.5	0.2

It will be seen that at the station (1), 8½ miles off Chatham Lights, the southward flow of current greatly exceeds the northward. This seems to be a characteristic of the offshore currents east of Cape Cod Peninsula, for the same phenomenon exists 5 miles east of Cape Cod Light and 7 miles east of Nauset Three Lights. The above table shows that off Chatham the dividing line between the inshore and the offshore currents lies somewhere between 4 and 8 miles from the shore.

TABLE 9.—CURRENT DIAGRAM: BOSTON HARBOR.

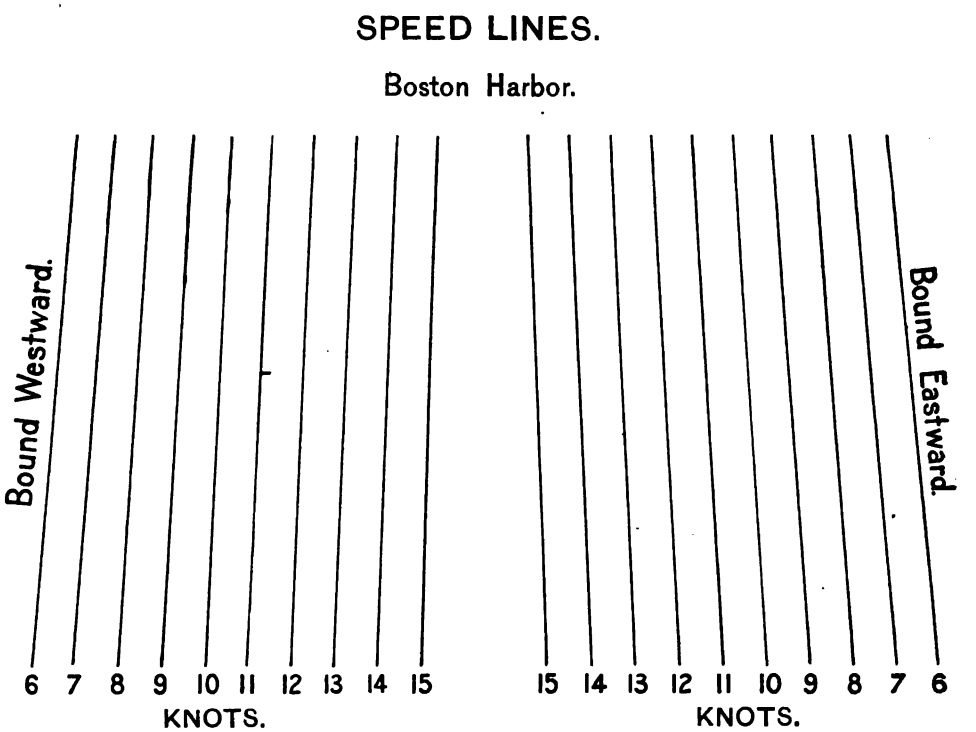
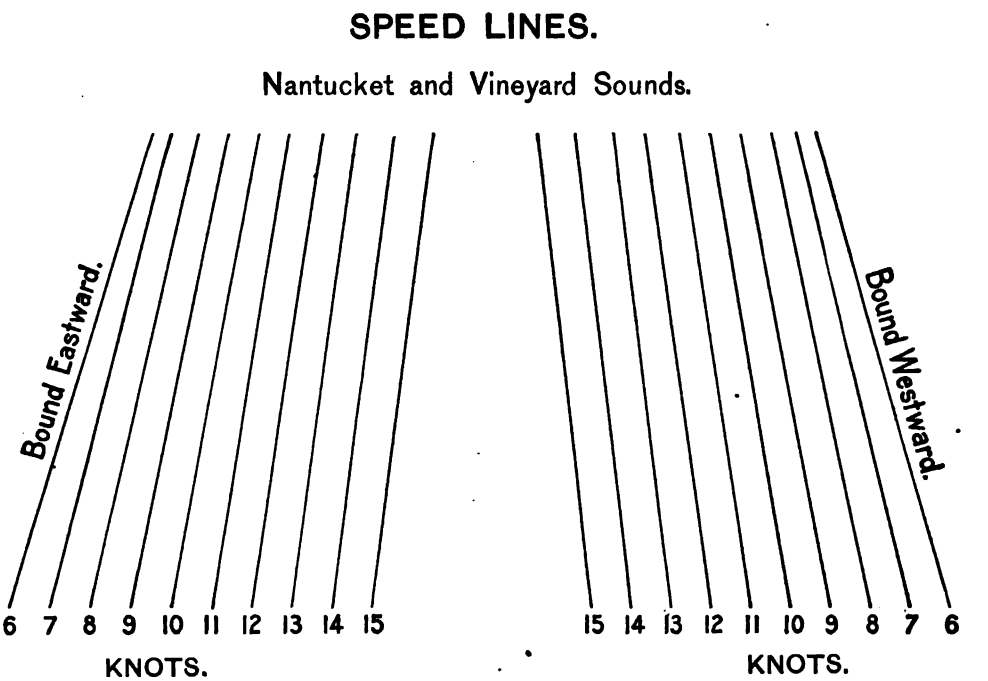


TABLE 9.—CURRENT DIAGRAM: NANTUCKET AND VINEYARD SOUNDS.


SPEED LINES.
Nantucket and Vineyard Sounds.
Bound Eastward.
6 7 8 9 10 11 12 13 14 15
KNOTS.
15 14 13 12 11 10 9 8 7 6
KNOTS.
Bound Westward.

Block Island Sound.—Between Point Judith and Block Island the strength of the flood or westerly current is about 1.8 knots, and the strength of the ebb or easterly current somewhat greater.

Between Block Island and Montauk Point the flood or northwesterly current is about 1.2 knots in the middle of the passage, and nearly 2 knots off Montauk Point, while the ebb or southeasterly current is nearly 2 knots across the passage.

About two miles north of Fort Pond Bay the current is about three-quarters of a knot in an easterly and westerly direction.

About a mile north of Cerberus Shoal Whistle the flood or westerly current is 1.4 knots, and the ebb current is 1.7 knots at its strength.

About two miles southeast from Watch Hill Point Light the strength of the flood is about 1.2 knots, and that of the ebb is about 1.0 knot.

The flood and ebb streams are about equal to one another half a mile to the northwest of Watch Hill Reef Spindle, and are 1.2 knots at their strength.

Long Island Sound.—All along the axis of the Sound from The Race to Eatons Point ebb begins about two hours thirty minutes after high water, and flood begins about two hours thirty minutes after low water at New London, Conn. Farther west these intervals gradually increase, but become very uncertain.

In the eastern portion of the Sound the currents turn about an hour earlier along the northern shore than along the southern shore.

HIGH WATER.							LOW WATER.						
Hours before.			Hours after.				Hours before.			Hours after.			
3	2	1	0	1	2	3	3	2	1	0	1	2	3
Current stations in Long Island Sound, referred to time of tide at New London, Conn. See pp. 77–80.													
Station (1) Long Island Sound, 4 miles S. from the mouth of the Connecticut River.													
N 73° W	S 85° W	S 65° W	S 60° W	S 75° W	. . .	N 55° E	N 51° E	N 46° E	N 48° E	N 53° E	N 60° E	N 67° E	N 75° W
0.4	1.0	1.5	1.6	1 2	0.0	1.1	1.6	2.1	2.4	2.4	1.6	0.5	0.2
Station (2) Long Island Sound, 8 miles S. from the Thimbles.													
W	S 85° W	S 78° W	S 70° W	S 62° W	S 54° W	N 50° E	N 51° E	N 53° E	N 55° E	N 57° E	N 59° E	N 61° E	N 88° W
0.1	0.7	1.2	1.5	1.0	0.2	0.1	0.4	0.9	1.2	1.0	0.7	0.3	0.1

In The Race the velocity at strength of ebb is 3.5 knots and of flood 3.2 knots. Going westward along the axis of the Sound these velocities gradually diminish until south of New Haven, where they are 1.1 and 1.0 knots, respectively. Going farther west they increase slightly until north of Eatons Point, where they are 1.3 and 1.4 knots, respectively. Still continuing westward, the velocities again diminish until between Rye Neck and Matinicock Point, where the velocity of either flood or ebb is 0.5 knot. Westward the velocities increase slightly, and off Pelham Bay are 0.9 knot for ebb and 0.7 knot for flood.

East River, N. Y.—The currents at different points along the East River are greatly modified by local conditions.

Off Old Ferry Point the slack before ebb lasts about twenty minutes and the slack before flood about eighteen minutes. The currents are quite irregular in this region.

Between Lawrence Point and Middle Ground slack water usually lasts less than ten minutes. The current flows directly along the channel.

Off Polhemus Dock slack water usually lasts from five to ten minutes. The currents follow the channel. Close to Polhemus Dock, within 200 feet, eddy currents are often found.

Between Wards Island and Ringgold's Dock slack water lasts twenty-five minutes.

Between Hallets Point and Hogs Back 8 knots have been measured on the flood; but elsewhere between Lawrence Point and Blackwells Island 3 and 4 knots at strength of ebb and flood are characteristic.

Between Hallets Point and Flood Rock the most rapid current on the ebb is very close to Flood Rock; the currents are direct and strong, with comparatively few eddies.

Off Hallets Point both ebb and flood set directly toward the Frying Pan Shoal. The flood current (setting to the eastward) sweeps close around Hallets Point and makes less eddy in the cove to the eastward than is found there on the ebb.

Between Great Mill Rock and Wards Island the flood current has numerous though not violent eddies. The slack water is of only a few minutes' duration. The main stream passes to the southward of Flood Rock.

There are strong eddies off Blackwells Island Light-House and off Hatter's Dock (the northern point of entrance to Hallets Cove).

In Blackwells Island Western Channel slack water usually lasts less than ten minutes. The currents follow the channel, and turn at nearly the same time throughout its length.

In Blackwells Island Eastern Channel slack water usually lasts less than five minutes. The current generally begins to follow the channel within thirty minutes of its slack. It has at no time any considerable velocity crosswise the channel. On the Blackwells Island side the current is about the same as in the channel, even to within a few feet of the sea wall. Both on the ebb and flood there is little current in the vicinity of the sea wall on the Long Island side. The currents turn at nearly the same time throughout the length of this channel.

Off East Twenty-third street slack water lasts from four to eight minutes. The strength of the ebb is nearly 3 knots.

HIGH WATER.							LOW WATER.						
Hours before.			Hours after.				Hours before.			Hours after.			
3	2	1	0	1	2	3	3	2	1	0	1	2	3
Current stations in Arthur Kill, referred to time of tide at Sandy Hook, New Jersey. *See* pp. 89–92.													
Station (1)				Off Tottenville, Staten Island.									
N 45° E	N 45° E	N 45° E	N 45° E	S 45° W	S 45° W	S 45° W	S 45° W	S 45° W	S 45° W	S 45° W	N 45° E	N 45° E	N 45° E
0.9	1.0	1.1	0.9	0.4	0.7	1.2	1.2	1.1	0.9	0.5	0.3	0.5	0.7
Station (2)				Off Rossville, Staten Island.									
N 45° E	N 45° E	N 45° E	N 45° E	. . .	S 45° W	S 45° W	S 45° W	S 45° W	S 45° W	S 45° W	N 45° E	N 45° E	N 45° E
0.5	0.5	0.4	0.2	0.0	0.2	0.5	0.5	0.5	0.4	0.1	0.2	0.4	0.5
Station (3)				Off Island View, New Jersey.									
N 20° E	N 20° E	N 20° E	N 20° E	N 20° E	S 20° W	S 20° W	S 20° W	S 20° W	S 20° W	S 20° W	. . .	N 20° E	N 20° E
0.8	0.8	0.8	0.6	0.2	0.1	0.6	0.7	0.9	0.9	0.5	0.0	0.3	0.7
Station (4)				About 0.4 mile N. 5° W. from Pralls Island.									
N 10° W	N 10° W	N 10° W	N 10° W	N 10° W	N 10° W	S 10° E	S 10° E	S 10° E	S 10° E	S 10° E	S 10° E	S 10° E	N 10° W
1.0	1.6	1.5	1.3	0.9	0.2	0.5	0.5	0.8	1.0	1.1	0.9	0.5	1.0

HIGH WATER.							LOW WATER.						
Hours before.			Hours after.				Hours before.			Hours after.			
3	2	1	0	1	2	3	3	2	1	0	1	2	3
Current stations in Newark Bay, referred to time of tide at New York, N. Y. See pp. 85–88.													
Station (1)			Off the mouth of Elizabethport Creek, New Jersey.										
N 36° E	N 36° E	N 36° E	N 36° E	N 36° E	S 36° W	S 36° W	S 36° W	S 36° W	S 36° W	S 36° W	S 36° W	. . .	N 36° E
1.1	1.5	1.7	1.5	0.7	0.2	1.0	1.0	1.3	1.3	1.1	0.7	0.0	0.7
Station (2)			About 0.2 mile W. from Corner Stake Light.										
N 85° E	N 85° E	N 85° E	N 85° E	N 85° E	S 85° W	S 85° W	S 85° W	S 85° W	S 85° W	S 85° W	S 85° W	N 85° E	N 85° E
1.1	1.2	1.2	0.8	0.4	0.2	0.8	0.8	1.0	0.9	0.7	0.3	0.4	1.0
Station (3)			About 0.4 mile N. 28° E. from Corner Stake Light.										
N 10° W	N 10° W	N 10° W	N 10° W	N 10° W	S 10° E	S 10° E	S 10° E	S 10° E	S 10° E	S 10° E	S 10° E	. . .	N 10° W
0.5	0.7	0.7	0.4	0.1	0.1	0.4	0.4	0.6	0.6	0.4	0.2	0.0	0.2
Station (4)			Off Newark, N. J., 0.1 mile below railroad bridge at outlet of Morris Canal.										
N 45° W	N 45° W	N 45° W	N 45° W	N 45° W	S 45° E	S 45° E	S 45° E	S 45° E	S 45° E	S 45° E	S 45° E	S 45° E	N 45° W
0.6	0.8	0.8	0.6	0.1	0.2	0.6	0.6	0.8	0.8	0.7	0.5	0.1	0.5
Current stations in Kill van Kull, referred to time of tide at New York, N. Y. See pp. 85–88.													
Station (1)			About 0.1 mile S. from Bergen Point, New Jersey.										
N 75° W	N 75° W	N 75° W	N 75° W	. . .	S 75° E	S 75° E	S 75° E	S 75° E	S 75° E	S 75° E	S 75° E	N 75° W	N 75° W
1.8	1.7	1.1	0.6	0.0	0.7	1.5	1.5	2.0	1.7	1.0	0.2	0.8	1.7
Station (2)			Off Port Richmond, Staten Island.										
S 80° W	S 80° W	S 80° W	S 80° W	N 80° E	N 80° E	N 80° E	N 80° E	N 80° E	N 80° E	N 80° E	. . .	S 80° W	S 80° W
1.8	1.8	1.5	0.8	0.3	1.6	2.1	2.1	2.2	1.6	0.9	0.0	1.2	1.7
Station (3)			Off New Brighton, Staten Island.										
W	W	W	E	E	E	E	E	E	E	E	W	W	W
0.6	0.4	0.2	0.2	0.6	0.9	1.0	1.0	0.8	0.6	0.2	0.2	0.5	0.6

The currents in Arthur Kill and Kill van Kull generally follow the direction of the channel.

Hudson River, N. Y.—In the path of the Hudson, from the Narrows to the Tappan Se it is running flood 15 feet below the surface fully an hour before the turning from ebb flood at the surface. Slack before ebb lasts from forty to fifty-five minutes. Slack befo flood lasts about thirty-five minutes.

The Narrows.—Slack water lasts from fifteen to thirty minutes. Both the ebb and flo currents appear first on the east side.

Near West Side of East Bank.—There is usually a slack before the flood current lastin about ten minutes.

Channels in New York Lower Bay.—In the Fourteen Feet Channel both the ebb a flood currents set obliquely across the channel. In the East, Swash, Main, and Gedn channels slack water lasts about twenty-five minutes. The half-ebb currents in the Swa Channel set to the eastward strongly. In the Main and Swash channels the flood curre starts in on their north side thirty minutes earlier than on the south side, and the ebb curre starts out on the south side of the channel thirty minutes earlier than on the north side.

TABLE 9.—CURRENT DIAGRAM: EAST RIVER, N. Y.

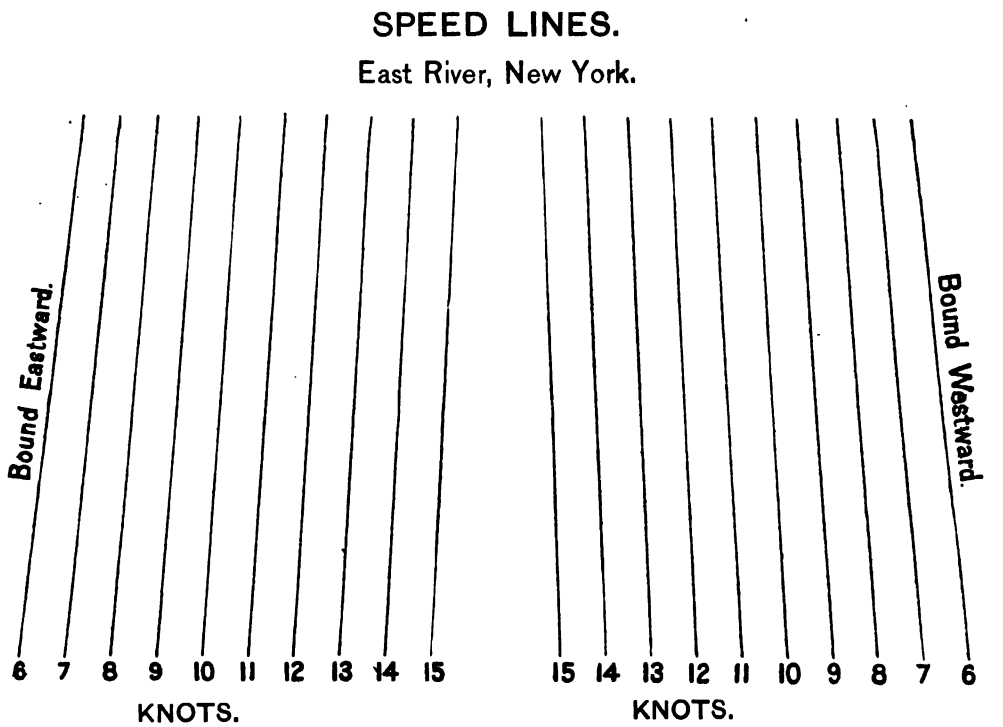


TABLE 9.—CURRENT DIAGRAM: NEW YORK ENTRANCE BY WAY OF SANDY HOOK.

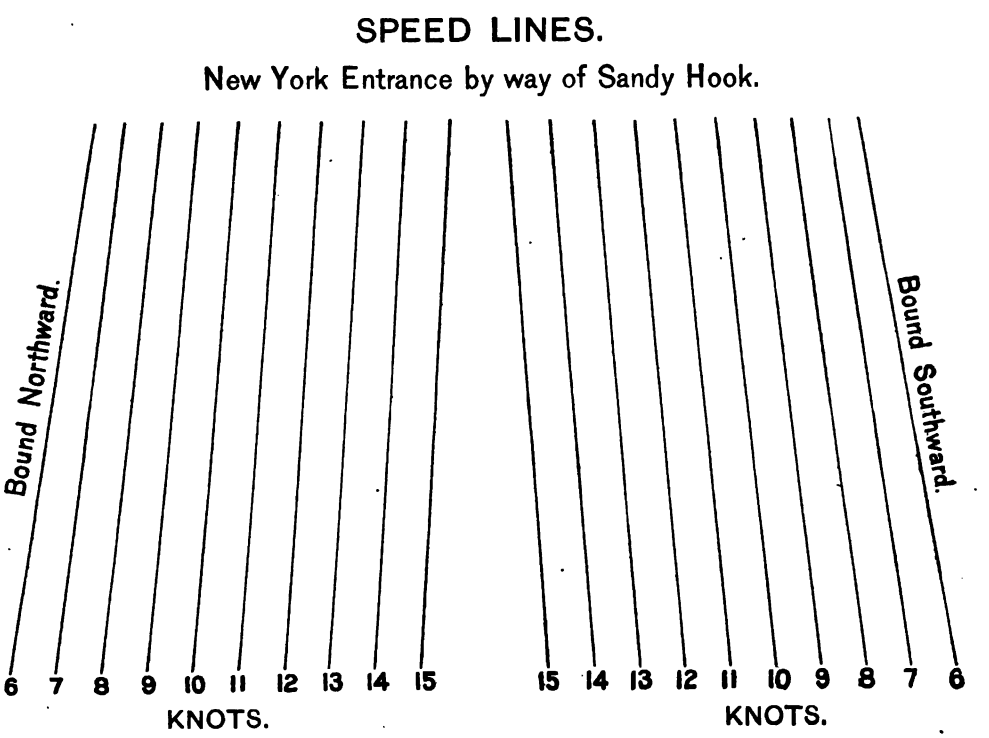

SPEED LINES.
New York Entrance by way of Sandy Hook.
Bound Northward.
6 7 8 9 10 11 12 13 14 15
KNOTS.
15 14 13 12 11 10 9 8 7 6
KNOTS.
Bound Southward.

TABLE 9.—CURRENT DIAGRAM: DELAWARE BAY.

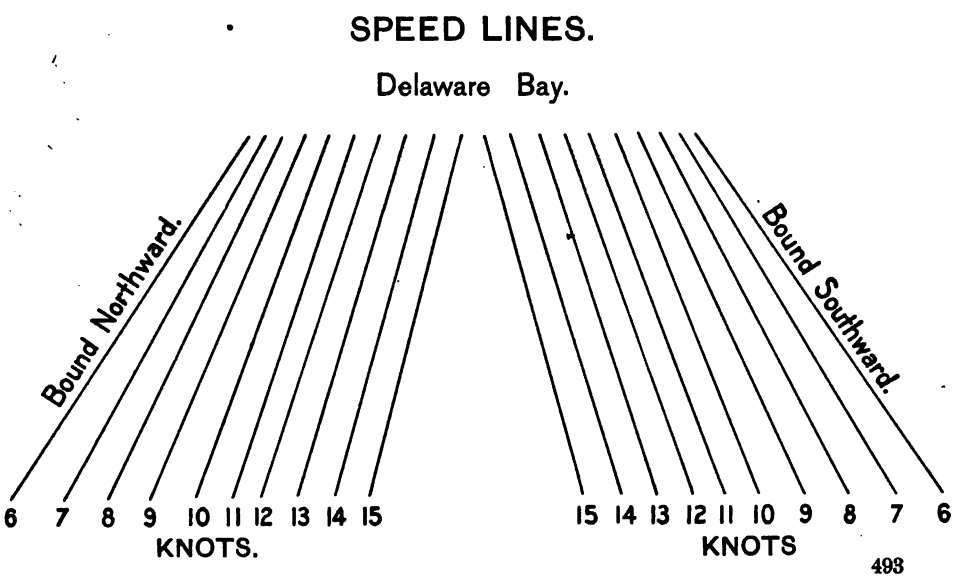


TABLE 9—CURRENT DIAGRAM: CHESAPEAKE BAY.

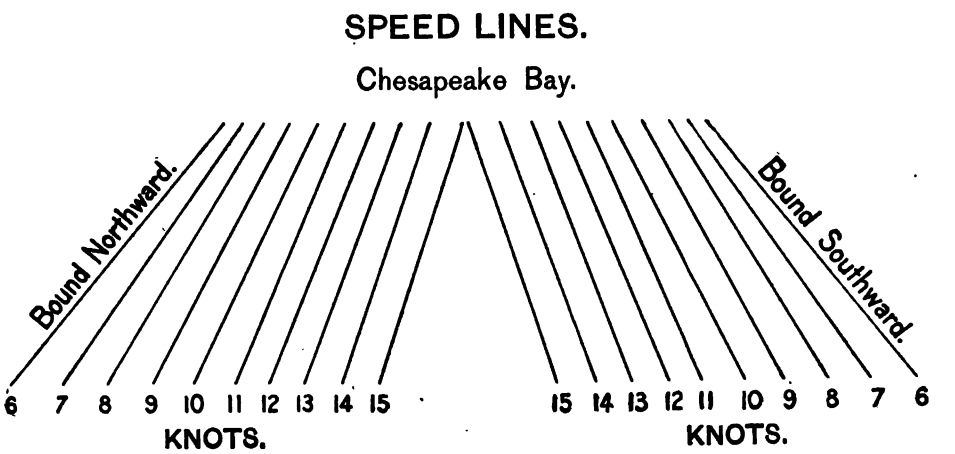


TABLE 9.—PREDICTED CURRENTS FOR THE YEAR 1912.

SEYMOUR NARROWS (Discovery Passage), BRITISH COLUMBIA.
SERGIUS NARROWS (Peril Strait), ALASKA.

SEYMOUR NARROWS (Discovery Passage), BRITISH COLUMBIA, 1912.

TIMES OF SLACK WATER.

JANUARY.

Moon.	Day of— W.	Mo.	Current turns from—			
			S to N.	N to S.	S to N.	N to S.
	M	1	3:30	9:50	14:35	20:55
	Tu	2	4:20	10:35	15:25	21:40
N	W	3	4:55	11:20	16:10	22:25
○	Th	4	5:30	12:00	16:55	23:10
P	F	5	6:05	12:45	17:50	. . .
			N to S.	S to N.	N to S.	S to N.
	S	6	0:05	6:45	13:30	18:45
	S	7	0:50	7:35	14:05	20:00
	M	8	1:50	8:10	14:35	21:05
E	Tu	9	2:50	8:55	15:15	22:10
☾	W	10	3:50	9:45	16:10	23:15
	Th	11	5:15	10:40	17:00	. . .
			S to N.	N to S.	S to N.	N to S.
	F	12	0:15	6:30	11:30	17:50
	S	13	1:10	7:40	12:30	18:50
	S	14	2:10	8:45	13:25	19:40
	M	15	2:55	9:30	14:15	20:30
	Tu	16	3:35	10:10	15:00	21:10
S	W	17	4:10	10:45	15:45	22:00
A	Th	18	4:50	11:15	16:30	22:40
●	F	19	5:25	11:50	17:05	23:15
	S	20	5:55	12:15	17:40	. . .
			N to S.	S to N.	N to S.	S to N.
	S	21	0:00	6:30	12:50	18:20
	M	22	0:40	7:05	13:20	19:20
	Tu	23	1:30	7:35	14:00	20:20
E	W	24	2:30	8:15	14:50	21:10
	Th	25	3:15	8:45	15:30	22:10
	F	26	4:20	9:40	16:30	23:20
☽	S	27	5:30	10:35	17:30	. . .
			S to N.	N to S.	S to N.	N to S.
	S	28	0:50	7:00	11:55	18:30
	M	29	2:10	8:20	13:10	19:35
	Tu	30	3:05	9:20	14:20	20:30
N	W	31	3:50	10:10	15:00	21:20

FEBRUARY.

Moon.	Day of— W.	Mo.	Current turns from—			
			S to N.	N to S.	S to N.	N to S.
P	Th	1	4:25	10:50	15:50	22:15
○	F	2	5:05	11:25	16:50	23:00
	S	3	5:45	11:55	17:45	23:50
	S	4	6:20	12:30	18:45	. . .
			N to S.	S to N.	N to S.	S to N.
	M	5	0:40	6:45	12:55	19:35
E	Tu	6	1:25	7:15	13:30	20:30
	W	7	2:20	7:55	14:10	21:20
	Th	8	3:25	8:40	15:05	22:15
☾	F	9	4:35	9:40	16:15	23:15
	S	10	6:10	10:30	17:10	. . .
			S to N.	N to S.	S to N.	N to S.
	S	11	0:10	7:05	11:40	18:10
	M	12	1:10	8:15	12:45	19:15
S	Tu	13	2:15	9:25	13:40	20:05
A	W	14	3:00	10:00	14:35	20:50
	Th	15	3:45	10:35	15:40	21:50
	F	16	4:20	11:05	16:25	22:35
●	S	17	4:50	11:30	17:05	23:15
	S	18	5:25	11:50	17:45	23:50
	M	19	5:55	12:15	18:20	. . .
			N to S.	S to N.	N to S.	S to N.
E	Tu	20	0:30	6:30	12:45	19:05
	W	21	1:15	7:00	13:15	19:50
	Th	22	2:00	7:35	14:00	20:35
	F	23	2:50	8:15	14:45	21:30
	S	24	3:45	9:05	15:40	22:30
☽	S	25	5:00	10:10	16:40	. . .
			S to N.	N to S.	S to N.	N to S.
	M	26	0:00	6:50	11:30	18:00
N	Tu	27	1:30	8:20	13:00	19:05
	W	28	2:30	9:15	13:55	20:10
	Th	29	3:15	9:55	15:00	21:10

MARCH.

Moon.	Day of— W.	Mo.	Current turns from—			
			S to N.	N to S.	S to N.	N to S.
P	F	1	3:50	10:15	15:55	22:05
	S	2	4:30	10:45	16:50	22:55
○	S	3	5:00	11:05	17:30	23:35
E	M	4	5:30	11:25	18:15	. . .
			N to S.	S to N.	N to S.	S to N.
	Tu	5	0:20	5:55	11:55	19:00
	W	6	1:10	6:30	12:25	19:45
	Th	7	2:00	7:10	13:05	20:30
	F	8	2:50	8:00	13:55	21:25
	S	9	3:50	8:50	14:50	22:20
☾	S	10	5:00	9:50	15:45	23:20
S	M	11	6:15	10:55	17:05	. . .
			S to N.	N to S.	S to N.	N to S.
A	Tu	12	0:30	7:40	12:05	18:20
	W	13	1:30	8:50	13:15	19:30
	Th	14	2:20	9:30	14:15	20:50
	F	15	3:15	10:10	15:30	22:00
	S	16	4:00	10:40	16:20	22:50
	S	17	4:35	11:10	17:05	23:35
●	M	18	5:20	11:40	17:50	. . .
			N to S.	S to N.	N to S.	S to N.
E	Tu	19	0:15	5:45	12:05	18:20
	W	20	0:55	6:10	12:30	19:00
	Th	21	1:25	6:35	12:50	19:35
	F	22	2:00	6:55	13:20	20:10
	S	23	2:40	7:25	13:50	20:55
	S	24	3:30	8:00	14:35	21:50
N	M	25	4:35	9:00	15:30	23:15
☽	Tu	26	6:05	10:25	16:50	. . .
			S to N.	N to S.	S to N.	N to S.
	W	27	1:05	7:15	12:25	18:20
P	Th	28	2:20	8:10	14:00	19:50
	F	29	3:15	9:00	15:15	21:20
	S	30	4:00	9:35	16:10	22:20
	S	31	4:35	10:15	16:55	23:15

This table gives the predicted 120th meridian times of Middle Slack Water; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:42 is 3:42 p. m. The heading "N to S" in the body of the table means that the current which had been setting toward the north before the time of slack water will begin to set southward shortly after that time; and "S to N" means exactly the reverse. Symbols and abbreviations relating to the moon: ●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator (not to be confounded with the compass directions over the times of slack); A, P, moon in apogee or perigee. The times in heavy-faced type are those which are most likely to be followed by a comparatively weak current. At weakest neap tides the passage may be made at all stages of the current. The current at spring tides in Seymour Narrows attains an estimated velocity of 12 miles or more per hour, and when it is setting strong to the southward heavy and dangerous swirls and overfalls form along the south shore of Maude Island, and generally, though in a somewhat lessened degree, over the surface of the channel between Maude Island and Race Point. With a strong northerly

SEYMOUR NARROWS (Discovery Passage), BRITISH COLUMBIA, 1912.

TIMES OF SLACK WATER.

APRIL.							MAY.							JUNE.						
Moon.	Day of— W.	Mo.	Current turns from—				Moon.	Day of— W.	Mo.	Current turns from—				Moon.	Day of— W.	Mo.	Current turns from—			
			S to N.	N to S.	S to N.	N to S.				S to N.	N to S.	S to N.	N to S.				N to S.	S to N.	N to S.	S to N.
E ○	M	1	5:05	10:45	17:30	23:50	○	W	1	4:15	10:45	17:35	. . .	S	S	1	0:30	5:10	11:45	18:35
	Tu	2	5:35	11:25	18:05	. . .				N to S.	S to N.	N to S.	S to N.		S	2	1:15	5:55	12:25	19:15
			N to S.	S to N.	N to S.	S to N.		Th	2	0:00	4:45	11:25	18:10		M	3	2:00	6:45	13:10	19:50
	W	3	0:30	6:05	12:00	18:35		F	3	0:35	5:25	12:00	18:50	A	Tu	4	2:40	7:40	13:50	20:30
	Th	4	1:10	6:30	12:30	19:10		S	4	1:20	6:05	12:45	19:35		W	5	3:25	9:00	14:40	21:20
	F	5	1:45	7:00	13:10	19:45	S	S	5	2:00	6:55	13:20	20:15		Th	6	4:20	10:05	15:30	22:10
	S	6	2:30	7:30	13:50	20:35		M	6	2:50	7:50	14:10	21:15	☾	F	7	5:15	11:10	16:50	23:05
S	S	7	3:10	8:15	14:45	21:40	A	Tu	7	3:45	9:00	14:55	22:20		S	8	6:10	12:20	18:10	23:50
	M	8	4:15	9:15	15:40	22:55		W	8	4:45	10:10	16:00	23:30	E	S	9	6:50	12:25	19:30	. . .
☾ A	Tu	9	5:20	10:30	16:40	. . .	☾	Th	9	5:50	11:50	17:30	. . .				S to N.	N to S.	S to N.	N to S.
			S to N.	N to S.	S to N.	N to S.				S to N.	N to S.	S to N.	N to S.		M	10	0:50	7:35	14:30	20:50
	W	10	0:05	6:30	12:05	17:50		F	10	0:40	7:00	13:00	18:50		Tu	11	1:45	8:20	15:20	21:50
	Th	11	1:20	7:45	13:35	19:20		S	11	1:35	7:45	14:15	20:15		W	12	2:30	9:00	16:10	22:35
	F	12	2:35	8:45	14:45	20:30	E	S	12	2:20	8:30	15:00	21:25		Th	13	3:10	9:40	16:45	23:10
	S	13	3:20	9:35	15:40	21:45		M	13	2:50	9:00	15:50	22:25	●	F	14	3:45	10:15	17:25	23:55
	S	14	4:00	10:05	16:15	22:45		Tu	14	3:20	9:35	16:25	23:05	N	S	15	4:25	11:05	18:05	. . .
E	M	15	4:20	10:30	16:55	23:30		W	15	3:50	10:15	17:05	23:45				N to S.	S to N.	N to S.	S to N.
	Tu	16	4:45	11:00	17:30	. . .	●	Th	16	4:20	10:50	17:40	. . .	P	S	16	0:45	5:20	11:55	18:45
			N to S.	S to N.	N to S.	S to N.				N to S.	S to N.	N to S.	S to N.		M	17	1:30	6:20	12:40	19:30
●	W	17	0:00	5:10	11:30	17:55		F	17	0:15	5:00	11:25	18:20		Tu	18	2:10	7:25	13:30	20:20
	Th	18	0:35	5:35	11:50	18:30		S	18	1:00	5:40	12:00	19:05		W	19	2:50	8:30	14:30	21:00
	F	19	1:05	6:05	12:15	19:10	N P	S	19	1:45	6:15	12:40	19:45		Th	20	3:25	9:45	15:45	21:45
	S	20	1:40	6:40	12:50	19:50		M	20	2:25	7:10	13:30	20:40	☽ E	F	21	4:05	11:00	17:00	22:40
N	S	21	2:20	7:10	13:30	20:40		Tu	21	3:15	8:30	14:25	21:40		S	22	5:10	12:10	18:20	23:45
P	M	22	3:20	8:00	14:30	21:45		W	22	4:30	9:50	15:35	22:55		S	23	6:15	13:15	19:25	. . .
	Tu	23	4:30	9:15	15:50	23:05	☽	Th	23	5:50	11:25	17:05	23:55				S to N.	N to S.	S to N.	N to S.
☽	W	24	6:00	11:00	17:10	. . .		F	24	6:40	12:45	18:40	. . .		M	24	0:35	7:15	14:15	20:20
			S to N.	N to S.	S to N.	N to S.				S to N.	N to S.	S to N.	N to S.		Tu	25	1:30	8:10	15:00	21:20
	Th	25	0:35	7:15	12:50	18:40	E	S	25	0:50	7:20	13:50	19:50		W	26	2:15	8:45	15:40	22:15
	F	26	1:45	8:00	14:10	20:05		S	26	1:40	8:00	14:45	21:00		Th	27	3:00	9:25	16:20	23:00
	S	27	2:20	8:35	14:55	21:10		M	27	2:10	8:30	15:30	21:45	S	F	28	3:40	10:05	17:00	23:35
E	S	28	2:55	9:15	15:45	22:10		Tu	28	2:45	9:10	16:10	22:30	○	S	29	4:20	10:45	17:35	. . .
	M	29	3:20	9:45	16:20	22:50		W	29	3:15	9:45	16:45	23:10				N to S.	S to N.	N to S.	S to N.
	Tu	30	3:45	10:15	17:00	23:25	○	Th	30	3:45	10:25	17:25	23:50		S	30	0:15	5:00	11:30	18:15
								F	31	4:30	11:05	18:00	. . .							

set of the current, swirls and overfalls of greater magnitude and danger occur just to the northward of Ripple Rock. The water seems to boil and whirlpools are formed large enough to engulf a small vessel. Great trees with their roots and branches attached will be turned end over end and around and around. The currents in Seymour Narrows are quite irregular (see the results obtained by Lieut. Commander E. K. Moore, U. S. N., given on page 500), and mariners are advised, therefore, to be on hand a sufficient time before the tabulated times (say half an hour or more), in order to make sure of the desired slack water, in case the predictions happen to be too late. If bound to the northward a vessel should be on hand somewhat before the time given under "S to N" in the table, and if bound to the southward somewhat before the time given under "N to S" in the table. To those having good local knowledge it is usually possible to pass south for about an hour after the current begins to set southward; then avoiding the strength of the current, the last hour and a half of the south current may be used, that is, during the 1h 30m before the time given under "S to N." Strangers should never vary from the rule of passing either way at the slack-water period, taking care to select a time of slack water which will be followed by a favorable current.

SEYMOUR NARROWS (Discovery Passage), BRITISH COLUMBIA, 1912.

TIMES OF SLACK WATER.

JULY.							AUGUST.							SEPTEMBER.						
Moon.	Day of— W.	Mo.	Current turns from— N to S.	S to N.	N to S.	S to N.	Moon.	Day of— W.	Mo.	Current turns from— N to S.	S to N.	N to S.	S to N.	Moon.	Day of— W.	Mo.	Current turns from— N to S.	S to N.	N to S.	S to N.
A	M	1	0:55	5:45	12:15	18:50		Th	1	1:10	6:30	13:15	19:25		S	1	1:35	8:05	14:20	19:50
	Tu	2	1:25	6:40	12:50	19:30	E	F	2	1:45	7:45	14:00	19:55		M	2	2:20	9:00	15:00	20:40
	W	3	2:00	7:30	13:35	20:10		S	3	2:15	8:40	14:55	20:25		Tu	3	3:10	10:00	16:20	21:40
	Th	4	2:30	8:25	14:15	20:45		S	4	3:00	9:45	16:00	21:15	☾	W	4	4:10	11:10	17:50	23:00
	F	5	3:10	9:25	15:05	21:35	☾	M	5	4:00	10:40	16:55	22:05	N	Th	5	5:20	12:45	19:40	. . .
E	S	6	4:00	10:20	16:00	22:25		Tu	6	4:50	12:10	18:15	23:15				S to N.	N to S.	S to N.	N to S.
☾	S	7	5:00	11:30	17:15	23:15		W	7	6:05	13:30	19:40	. . .		F	6	0:15	6:40	14:00	20:50
	M	8	5:50	12:45	19:00	. . .				S to N.	N to S.	S to N.	N to S.		S	7	1:30	7:40	14:55	21:40
			S to N.	N to S.	S to N.	N to S.		Th	8	0:40	7:05	14:40	20:50		S	8	2:35	8:45	15:35	22:05
	Tu	9	0:15	6:50	13:55	20:30	N	F	9	1:45	8:00	15:35	21:50	P	M	9	3:30	9:30	16:10	22:30
	W	10	1:15	7:40	15:05	21:30		S	10	2:45	8:55	16:10	22:35	●	Tu	10	4:20	10:30	16:40	22:50
	Th	11	2:10	8:40	16:00	22:20		S	11	3:35	9:50	16:50	23:10	E	W	11	5:10	11:15	17:15	23:15
N	F	12	3:00	9:20	16:40	23:00	P	M	12	4:25	10:45	17:30	23:40		Th	12	5:50	12:00	17:40	23:40
	S	13	3:45	10:05	17:15	23:40	●	Tu	13	5:20	11:30	18:00	. . .		F	13	6:35	12:50	18:10	. . .
●	S	14	4:35	10:50	17:45	. . .				N to S.	S to N.	N to S.	S to N.				N to S.	S to N.	N to S.	S to N.
P			N to S.	S to N.	N to S.	S to N.		W	14	0:10	6:10	12:15	18:35		S	14	0:05	7:20	13:30	18:50
	M	15	0:20	5:25	11:40	18:20	E	Th	15	0:45	7:05	13:00	19:05		S	15	0:40	8:10	14:20	19:35
	Tu	16	1:05	6:15	12:30	19:05		F	16	1:15	7:55	13:50	19:35		M	16	1:25	9:00	15:20	20:30
	W	17	1:45	7:20	13:15	19:50		S	17	1:45	8:50	14:45	20:20	☽	Tu	17	2:30	10:10	16:30	21:30
	Th	18	2:20	8:35	14:15	20:30		S	18	2:35	9:50	15:50	21:10	S	W	18	3:30	11:10	18:00	22:45
E	F	19	2:50	9:35	15:15	21:15	☽	M	19	3:35	10:45	17:15	22:10		Th	19	4:50	12:15	19:25	23:50
☽	S	20	3:40	10:45	16:25	22:00		Tu	20	4:45	11:50	18:30	23:10		F	20	6:10	13:20	20:30	. . .
	S	21	4:30	11:40	17:45	23:00		W	21	5:45	12:50	19:55	. . .				S to N.	N to S.	S to N.	N to S.
	M	22	5:30	12:45	18:45	. . .				S to N.	N to S.	S to N.	N to S.	A	S	21	1:00	7:25	14:20	21:20
			S to N.	N to S.	S to N.	N to S.	S	Th	22	0:20	6:50	13:55	21:00		S	22	2:10	8:30	15:10	22:00
	Tu	23	0:00	6:30	13:45	20:10		F	23	1:30	7:55	14:50	21:50		M	23	3:10	9:30	15:50	22:30
	W	24	1:00	7:25	14:40	21:10		S	24	2:35	8:45	15:35	22:30		Tu	24	4:10	10:20	16:30	22:55
	Th	25	1:55	8:15	15:20	21:50	A	S	25	3:30	9:35	16:10	23:00		W	25	5:00	11:10	17:00	23:15
S	F	26	2:50	9:10	16:05	22:35		M	26	4:05	10:20	16:40	23:20	E	Th	26	5:30	11:45	17:25	23:40
	S	27	3:30	9:45	16:40	23:05	○	Tu	27	4:50	11:00	17:15	23:45	○	F	27	6:00	12:25	17:55	. . .
○	S	28	4:20	10:30	17:15	23:45		W	28	5:30	11:40	17:45	. . .				N to S.	S to N.	N to S.	S to N.
A	M	29	5:00	11:05	17:45	. . .				N to S.	S to N.	N to S.	S to N.		S	28	0:10	6:35	13:00	18:20
			N to S.	S to N.	N to S.	S to N.	E	Th	29	0:05	6:00	12:15	18:15		S	29	0:30	7:15	13:35	18:45
	Tu	30	0:15	5:30	11:45	18:15		F	30	0:30	6:40	12:40	18:45		M	30	1:00	7:50	14:15	19:25
	W	31	0:40	6:05	12:30	18:45		S	31	1:00	7:20	13:30	19:15							

This table gives the predicted 120th meridian times of Middle Slack Water; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:42 is 3:42 p. m. The heading "N to S" in the body of the table means that the current which had been setting toward the north before the time of slack water will begin to set southward shortly after that time; and "S to N" means exactly the reverse. Symbols and abbreviations relating to the moon: ●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator (not to be confounded with the compass directions over the times of slack); A, P, moon in apogee or perigee. The times in heavy-faced type are those which are most likely to be followed by a comparatively weak current. At weakest neap tides the passage may be made at all stages of the current. The current at spring tides in Seymour Narrows attains an estimated velocity of 12 miles or more per hour, and when it is setting strong to the southward heavy and dangerous swirls and overfalls form along the south shore of Maude Island, and generally, though in a somewhat lessened degree, over the surface of the channel between Maude Island and Race Point. With a strong northerly

SEYMOUR NARROWS (Discovery Passage), BRITISH COLUMBIA, 1912.

TIMES OF SLACK WATER.

OCTOBER.							NOVEMBER.							DECEMBER.						
Moon.	Day of W.	Day of Mo.	Current turns from—				Moon.	Day of W.	Day of Mo.	Current turns from—				Moon.	Day of W.	Day of Mo.	Current turns from—			
			N to S.	S to N.	N to S.	S to N.				N to S.	S to N.	N to S.	S to N.				N to S.	S to N.	N to S.	S to N.
	Tu	1	1:50	8:40	15:05	20.20	☾	F	1	3:05	10:40	17:30	21:45	☾	S	1	4:20	11:25	18:15	23:25
N	W	2	2:50	9:45	16:00	21:20		S	2	4:15	12:10	18:35	23:25	E	M	2	5:35	12:35	19:20	. . .
☾	Th	3	3:55	11:05	17:45	22:45	P	S	3	5:35	13:30	19:35	. . .				S to N.	N to S.	S to N.	N to S.
	F	4	5:15	12:35	19:30	. . .				S to N.	N to S.	S to N.	N to S.		Tu	3	0:55	6:45	13:35	20:00
			S to N.	N to S.	S to N.	N to S.		M	4	1:00	6:55	14:30	20:20		W	4	2:00	7:50	14:15	20:30
	S	5	0:10	6:30	14:00	20:45	E	Tu	5	2:20	8:05	15:15	20:55		Th	5	2:50	8:55	14:45	21:00
	S	6	1:25	7:35	14:50	21:35		W	6	3:15	9:15	15:50	21:30		F	6	3:35	9:55	15:15	21.35
P	M	7	2:30	8:35	15:20	22:00		Th	7	4:00	10:15	16:25	22:05		S	7	4:15	10:40	15:45	22:15
	Tu	8	3:15	9:25	15:55	22:20	●	F	8	4:45	11:05	17:00	22:45	●	S	8	4:55	11:30	16:20	22:55
E	W	9	4:00	10:05	16:25	22:40		S	9	5:25	11:45	17:30	23:20	S	M	9	5:35	12:00	16:55	23:30
●	Th	10	4:45	10:50	16:50	21:00		S	10	6:00	12:25	18:00	23:55		Tu	10	6:20	12:45	17:40	. . .
	F	11	5:25	11:35	17:20	23:20		M	11	6:35	13:05	18:40	. . .				N to S.	S to N.	N to S.	S to N.
	S	12	6:05	12:15	17:50	23:45				N to S.	S to N.	N to S.	S to N.		W	11	0:15	7:05	13:30	18:25
	S	13	6:50	13:00	18:30	. . .	S	Tu	12	0:40	7:20	13:55	19:10		Th	12	0:55	7:50	14:20	19:10
			N to S.	S to N.	N to S.	S to N.		W	13	1:20	8:05	14:45	19:45	A	F	13	1:35	8:35	15:05	20:00
	M	14	0:20	7:25	13:55	19:15		Th	14	2:10	9:00	15:35	20:30		S	14	2:15	9:25	15:55	21:00
S	Tu	15	1:05	8:25	14:55	20:05		F	15	3:00	10:00	16:35	21:30		S	15	3:00	10:20	16:45	22:05
	W	16	2:00	9:35	16:00	21:05	A	S	16	3:55	11:10	17:35	22:40	☽	M	16	3:55	11:20	17:35	23:10
☽	Th	17	3:05	10:40	17:20	22:10	☽	S	17	4:45	12:15	18:40	23:55	E	Tu	17	4:55	12:15	18:25	. . .
	F	18	4:15	11:45	18:45	23:15		M	18	5:50	13:20	19:40	. . .				S to N.	N to S.	S to N.	N to S.
A	S	19	5:25	12:50	19:55	. . .				S to N.	N to S.	S to N.	N to S.		W	18	0:30	6:15	13:10	19:20
			S to N.	N to S.	S to N.	N to S.	E	Tu	19	1:10	6:55	14:20	20:25		Th	19	1:25	7:35	13:55	20:10
	S	20	0:15	6:35	13:45	20:50		W	20	2:20	8:05	15:10	21:15		F	20	2:40	8:55	14:40	20:50
	M	21	1:15	7:45	14:40	21:30		Th	21	3:15	9:25	15:45	21:50		S	21	3:40	10:05	15:15	21:30
	Tu	22	2:15	8:40	15:20	22:00		F	22	4:00	10:15	16:10	22:25		S	22	4:45	11:05	15:50	22:10
E	W	23	3:10	9:30	15:55	22:25		S	23	4:40	11:10	16:40	22:50	N	M	23	5:05	11:45	16:30	22:55
	Th	24	4:05	10:20	16:30	22:50	○	S	24	5:15	11:55	17:05	23:20	○	Tu	24	5:50	12:30	17:10	23:40
○	F	25	4:50	11:05	17:00	23:15		M	25	6:00	12:35	17:35	23:50	P	W	25	6:40	13:15	17:55	. . .
	S	26	5:30	11:50	17:30	23:45	N	Tu	26	6:40	13:10	18:15	. . .				N to S.	S to N.	N to S.	S to N.
	S	27	6:10	12:30	18:00	. . .				N to S.	S to N.	N to S.	S to N.		Th	26	0:20	7:25	14:00	18:40
			N to S.	S to N.	N to S.	S to N.		W	27	0:25	7:30	14:00	18:55		F	27	1:05	8:05	14:40	19:40
	M	28	0:15	6:55	13:20	18:30	P	Th	28	1:10	8:15	14:50	19:40		S	28	1:50	8:50	15:30	20:50
	Tu	29	0:45	7:40	14:05	19:05		F	29	2:05	9:10	15:50	20:35	E	S	29	2:45	9:45	16:45	22:00
N	W	30	1:25	8:25	15:10	19:40		S	30	3:10	10:10	17:05	21:50	☾	M	30	3:45	10:45	17:40	23:15
	Th	31	2:10	9:25	16:25	20:30									Tu	31	5:05	11:45	18:30	. . .

set of the current, swirls and overfalls of greater magnitude and danger occur just to the northward of Ripple Rock. The water seems to boil and whirlpools are formed large enough to engulf a small vessel. Great trees with their roots and branches attached will be turned end over end and around and around. The currents in Seymour Narrows are quite irregular (see the results obtained by Lieut. Commander E. K. Moore, U. S. N., given on page 500), and mariners are advised, therefore, to be on hand a sufficient time before the tabulated times (say half an hour or more), in order to make sure of the desired slack water in case the predictions happen to be too late. If bound to the northward a vessel should be on hand somewhat before the time given under "S to N" in the table, and if bound to the southward somewhat before the time given under "N to S" in the table. To those having good local knowledge it is usually possible to pass south for about an nour after the current begins to set southward; then avoiding the strength of the current, the last hour and a half of the south current may be used, that is, during the $1^h\ 30^m$ before the time given under "S to N." Strangers should never vary from the rule of passing either way at the slack-water period, taking care to select a time of slack water which will be followed by a favorable current.

SERGIUS NARROWS (Peril Strait), ALASKA, 1912.

TIMES OF SLACK WATER.

JANUARY.							FEBRUARY.							MARCH.						
Moon.	Day of— W.	Mo.	Current turns from— S to N.	N to S.	S to N.	N to S.	Moon.	Day of— W.	Mo.	Current turns from— S to N.	N to S.	S to N.	N to S.	Moon.	Day of— W.	Mo.	Current turns from— S to N.	N to S.	S to N.	N to S.
	M	1	1:55	8:10	14:30	20:40	P	Th	1	3:40	9:45	16:00	22:10		F	1	3:30	9:35	15:50	22:00
	Tu	2	2:55	9:00	15:20	21:25	○	F	2	4:25	10:30	16:50	22:50		S	2	4:10	10:20	16:30	22:35
N	W	3	3:45	9:50	16:05	22:15		S	3	5:15	11:10	17:40	23:30	○	S	3	4:55	10:55	17:15	23:15
♀	Th	4	4:30	10:35	17:00	23:00		S	4	6:00	11:50	18:15	. . .	E	M	4	5:30	11:25	17:50	23:45
	F	5	5:30	11:25	17:50	23:45				N to S.	S to N.	N to S.	S to N.		Tu	5	6:05	12:00	18:25	. . .
	S	6	6:15	12:05	18:40	. . .		M	5	0:05	6:35	12:25	18:55				N to S.	S to N.	N to S.	S to N.
			N to S.	S to N.	N to S.	S to N.	E	Tu	6	0:45	7:15	13:05	19:35		W	6	0:15	6:45	12:35	19:05
	S	7	0:30	7:05	12:55	19:25		W	7	1:15	7:55	13:45	20:15		Th	7	0:50	7:20	13:15	19:45
	M	8	1:15	7:45	13:35	20:10		Th	8	2:15	8:45	14:40	21:10		F	8	1:30	8:05	14:00	20:30
E	Tu	9	2:00	8:35	14:30	21:00	☾	F	9	3:20	9:45	15:50	22:10		S	9	2:25	9:00	15:00	21:25
☾	W	10	3:00	9:30	15:35	22:00		S	10	4:20	10:45	16:55	22:15	☾	S	10	3:30	10:00	16:05	22:35
	Th	11	4:10	10:30	16:45	23:00		S	11	5:30	11:45	18:10	. . .	S	M	11	4:50	11:15	17:30	23:50
	F	12	5:15	11:30	17:50	. . .				S to N.	N to S.	S to N.	N to S.	A	Tu	12	6:10	12:30	18:50	. . .
			S to N.	N to S.	S to N.	N to S.		M	12	0:30	6:50	13:00	19:30				S to N.	N to S.	S to N.	N to S.
	S	13	0:00	6:20	12:30	19:00	S	Tu	13	1:40	7:55	14:15	20:20		W	13	1:00	7:30	13:40	19:55
	S	14	1:05	7:30	13:40	20:00	A	W	14	2:45	8:45	14:55	21:05		Th	14	2:10	8:20	14:35	20:40
	M	15	2:10	8:20	14:40	20:45		Th	15	3:20	9:25	15:40	21:45		F	15	2:50	8:50	15:15	21:20
	Tu	16	2:55	9:05	15:15	21:20		F	16	3:55	10:05	16:10	22:20		S	16	3:35	9:40	15:50	22:00
S A	W	17	3:35	9:40	15:55	22:05	●	S	17	4:30	10:35	16:50	22:50		S	17	4:05	10:15	16:20	22:25
	Th	18	4:10	10:20	16:30	22:35		S	18	5:05	11:05	17:20	23:20	●	M	18	4:40	10:40	16:55	23:00
●	F	19	4:55	10:55	17:10	23:10		M	19	5:40	11:35	18:00	23:50	E	Tu	19	5:15	11:10	17:25	23:25
	S	20	5:30	11:30	17:50	23:40	E	Tu	20	6:10	12:00	18:20	. . .		W	20	5:40	11:35	18:00	23:50
	S	21	6:05	11:55	18:20	. . .				N to S.	S to N.	N to S.	S to N.		Th	21	6:15	12:10	18:35	. . .
			N to S.	S to N.	N to S.	S to N.		W	21	0:10	6:40	12:35	19:00				N to S.	S to N.	N to S.	S to N.
	M	22	0:10	6:35	12:40	18:55		Th	22	0:50	7:15	13:10	19:35		F	22	0:25	6:50	12:45	19:10
	Tu	23	0:45	7:10	13:05	19:30		F	23	1:25	7:55	13:45	20:20		S	23	1:00	7:35	13:25	20:00
E	W	24	1:20	7:50	13:40	20:05		S	24	2:15	8:45	14:45	21:10		S	24	1:50	8:30	14:30	21:00
	Th	25	2:00	8:35	14:30	20:50	☽	S	25	3:15	9:50	15:55	22:30	N	M	25	2:00	9:40	15:45	22:15
☽	F	26	2:50	9:20	15:25	21:45		M	26	4:45	11:05	17:25	23:50	☽	Tu	26	4:25	11:00	17:20	23:50
	S	27	3:50	10:20	16:30	22:50	N	Tu	27	6:15	12:30	19:00	. . .		W	27	6:10	12:30	18:55	. . .
	S	28	5:05	11:30	17:45	. . .				S to N.	N to S.	S to N.	N to S.				S to N.	N to S.	S to N.	N to S.
			S to N.	N to S.	S to N.	N to S.		W	28	1:20	7:45	14:00	20:20	P	Th	28	1:20	7:40	13:55	20:10
	M	29	0:05	6:30	12:50	19:15	P	Th	29	2:35	8:45	15:05	21:10		F	29	2:30	8:40	14:55	21:05
	Tu	30	1:30	7:50	14:10	20:25									S	30	3:15	9:20	15:35	21:40
N	W	31	2:40	8:50	15:10	21:20								E	S	31	3:50	10:00	16:10	22:20

This table gives the predicted 135th meridian times of Middle Slack Water; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:42 is 3:42 p. m. The heading "N to S" in the body of the table means that the current which had been setting toward the north before the time of slack water will begin to set southward shortly after that time; and "S to N" means exactly the reverse. Symbols and abbreviations relating to the moon: ●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator (not to be confounded with the compass directions over the times of slack); A, P, moon in apogee or perigee. Slack Water usually lasts from five to twenty minutes; those slacks which occur under the heading "N to S" are locally known as "High Water Slack," and those under "S to N" as "Low Water Slack," although high and low waters do not occur until about two hours later. The times in heavy-faced type are those which are most likely to be followed by a comparatively weak current. At weakest neap tides those with good local knowledge pass through Sergius Narrows at all stages of the current. The current at spring tides in Sergius Narrows attains an estimated velocity of 10 to 12 miles per hour in the narrowest and worst part of the Narrows, between Eureka Ledge and the north shore. When the current is running strong

SERGIUS NARROWS (Peril Strait), ALASKA, 1912.

TIMES OF SLACK WATER.

Moon.	Day of— W.	Mo.	Current turns from—			
APRIL.						
			S to N.	N to S.	S to N.	N to S.
○	M	1	4:30	10:30	16:45	22:45
	Tu	2	5:05	11:05	17:20	23:20
	W	3	5:40	11:35	18:00	23:50
	Th	4	6:15	12:05	18:30	. . .
			N to S.	S to N.	N to S	S to N.
	F	5	0:25	6:50	12:45	19:10
	S	6	1:00	7:35	13:25	20:00
S	S	7	1:50	8:30	14:20	21:00
	M	8	3:00	9:25	15:30	22:00
☾ A	Tu	9	4:10	10:30	16:45	23:10
	W	10	5:30	11:45	18:05	. . .
			S to N.	N to S.	S to N.	N to S.
	Th	11	0:20	6:45	12:55	19:20
	F	12	1:20	7:45	13:55	20:10
	S	13	2:20	8:35	14:45	20:55
	S	14	3:00	9:10	15:20	21:25
E	M	15	3:35	9:40	15:50	22:00
	Tu	16	4:05	10:15	16:20	22:25
●	W	17	4:40	10:40	17:00	23:00
	Th	18	5:15	11:15	17:35	23:30
	F	19	5:55	11:50	18:15	. . .
			N to S.	S to N.	N to S.	S to N.
	S	20	0:05	6:35	12:25	19:00
N	S	21	0:50	7:25	13:15	19:55
P	M	22	1:45	8:30	14:20	21:00
☽	Tu	23	3:00	9:40	15:50	22:15
	W	24	4:30	11:00	17:15	23:40
	Th	25	6:00	12:20	18:45	. . .
			S to N.	N to S.	S to N.	N to S.
	F	26	1:00	7:20	13:35	19:50
	S	27	2:00	8:15	14:35	20:40
E	S	28	2:50	9:00	15:15	21:20
	M	29	3:30	9:35	15:45	21:55
	Tu	30	4:00	10:10	16:15	22:25
MAY.						
			S to N.	N to S.	S to N.	N to S.
○	W	1	4:40	10:40	16:55	23:00
	Th	2	5:15	11:15	17:30	23:30
	F	3	5:50	11:45	18:10	. . .
			N to S.	S to N.	N to S.	S to N.
	S	4	0:00	6:30	12:25	18:50
S	S	5	0:45	7:15	13:05	19:35
	M	6	1:25	8:00	13:50	20:25
A	Tu	7	2:20	9:00	15:00	21:20
	W	8	3:25	9:50	16:00	22:30
☾	Th	9	4:45	11:00	17:20	23:30
	F	10	5:40	12:00	18:20	. . .
			S to N.	N to S.	S to N.	N to S.
	S	11	0:30	6:55	13:10	19:30
E	S	12	1:30	7:50	14:00	20:15
	M	13	2:25	8:35	14:45	20:55
	Tu	14	3:00	9:10	15:15	21:20
	W	15	3:40	9:45	15:55	22:05
●	Th	16	4:10	10:20	16:30	22:35
	F	17	4:55	10:55	17:20	23:15
	S	18	5:40	11:35	18:00	23:50
N P	S	19	6:30	12:20	18:55	. . .
			N to S.	S to N.	N to S.	S to N.
	M	20	0:45	7:20	13:10	19:50
	Tu	21	1:40	8:25	14:15	20:50
	W	22	2:50	9:30	15:35	22:05
☽	Th	23	4:15	10:40	16:55	23:15
	F	24	5:30	11:50	18:10	. . .
			S to N.	N to S.	S to N.	N to S.
E	S	25	0:25	6:50	12:55	19:20
	S	26	1:30	7:50	14:00	20:15
	M	27	2:25	8:35	14:45	20:55
	Tu	28	3:05	9:10	15:25	21:30
	W	29	3:45	9:45	16:00	22:10
○	Th	30	4:15	10:20	16:35	22:40
	F	31	4:55	10:55	17:15	23:15
JUNE.						
			S to N.	N to S.	S to N.	N to S.
S	S	1	5:35	11:30	17:50	23:45
	S	2	6:15	12:05	18:35	. . .
			N to S.	S to N.	N to S.	S to N.
	M	3	0:25	6:55	12:45	19:10
A	Tu	4	1:00	7:35	13:25	19:55
	W	5	1:45	8:25	14:15	20:45
	Th	6	2:45	9:10	15:10	21:40
☾	F	7	3:45	10:10	16:20	22:30
	S	8	4:45	11:00	17:20	23:30
E	S	9	5:50	12:00	18:20	. . .
			S to N.	N to S.	S to N.	N to S.
	M	10	0:30	6:50	13:00	19:30
	Tu	11	1:30	7:50	14:05	20:20
	W	12	2:30	8:40	14:50	21:00
	Th	13	3:15	9:20	15:35	21:40
●	F	14	3:55	10:05	16:15	22:25
N	S	15	4:45	10:45	17:10	23:10
P	S	16	5:35	11:30	18:00	23:50
	M	17	6:25	12:15	18:50	. . .
			N to S.	S to N.	N to S.	S to N.
	Tu	18	0:40	7:10	13:00	19:40
	W	19	1:30	8:05	14:00	20:30
	Th	20	2:30	9:00	15:05	21:30
☽ E	F	21	3:40	10:05	16:15	22:35
	S	22	4:45	11:15	17:25	23:40
	S	23	6:00	12:15	18:35	. . .
			S to N.	N to S.	S to N.	N to S.
	M	24	0:40	7:10	13:20	19:40
	Tu	25	1:45	8:05	14:20	20:30
	W	26	2:40	8:45	15:00	21:10
	Th	27	3:20	9:30	15:40	21:50
S	F	28	4:00	10:10	16:15	22:25
○	S	29	4:40	10:40	17:00	23:00
	S	30	5:20	11:15	17:40	23:35

it is not safe for any vessel, especially a large one, to pass from below Francis Rocks to above Liesnoi Shoal. During spring tide it is recommended to pass through only at or near the time of middle slack. The water at the strength of the current is very much disturbed, heaving up over the ledge in the middle and boiling and swirling in the channel, especially at the end where the water is passing out. The channel is so narrow and the current so variable in direction that if a vessel gets a sheer she may be carried on the reef or shore before she can be straightened out. The currents in Sergius Narrows are quite irregular (see the results obtained by Lieut. Commander E. K. Moore, U. S N., given on page 501), and mariners are advised, therefore, to be on hand a sufficient time before the tabulated times (say half an hour or more), in order to make sure of the desired slack water, in case the predictions happen to be too late. If bound to the northward, a vessel should be on hand somewhat before the time given under "S to N" in the table, and if bound to the southward, somewhat before the time given under "N to S" in the table. There is about half an hour on each side of middle slack when any ordinary powered vessel can pass in perfect safety, especially if going with the current. Strangers should never vary from the rule of passing either way at the slack-water period, taking care to select a time of slack water which will be followed by a favorable current.

SERGIUS NARROWS (Peril Strait), ALASKA, 1912.

TIMES OF SLACK WATER.

JULY.								AUGUST.								SEPTEMBER.							
Moon.	Day of— W.	Mo.	Current turns from—					Moon.	Day of— W.	Mo.	Current turns from—					Moon.	Day of— W.	Mo.	Current turns from—				
			S to N.	N to S.	S to N.	N to S.					N to S.	S to N.	N to S.	S to N.					N to S.	S to N.	N to S.	S to N.	
A	M	1	6:00	11:50	18:15	. . .			Th	1	0:10	6:40	12:30	18:55			S	1	0:45	7:10	13:00	19:35	
			N to S.	S to N.	N to S.	S to N.		E	F	2	0:45	7:10	13:00	19:30			M	2	1:25	7:55	13:45	20:20	
	Tu	2	0:05	6:30	12:25	18:50			S	3	1:20	7:45	13:35	20:05			Tu	3	2:15	8:45	14:45	21:10	
	W	3	0:40	7:10	13:00	19:30			S	4	2:00	8:35	14:30	20:50	☾		W	4	3:20	9:50	16:00	22:30	
	Th	4	1:20	7:45	13:35	20:05		☾	M	5	2:50	9:15	15:15	21:45	N		Th	5	4:50	11:15	17:35	. . .	
	F	5	2:00	8:30	14:25	20:45			Tu	6	3:50	10:20	16:25	22:50					S to N.	N to S.	S to N.	N to S.	
E	S	6	2:45	9:15	15:15	21:35			W	7	5:05	11:30	17:50	. . .			F	6	0:00	6:20	12:40	19:05	
☾	S	7	3:45	10:05	16:15	22:30					S to N.	N to S.	S to N.	N to S.			S	7	1:30	7:50	14:10	20:25	
	M	8	4:45	11:05	17:20	23:40			Th	8	0:10	6:35	12:50	19:15			S	8	2:40	8:50	15:05	21:15	
	Tu	9	6:00	12:05	18:30	. . .		N	F	9	1:40	7:55	14:20	20:30	P		M	9	3:35	9:40	15:50	22:00	
			S to N.	N to S.	S to N.	N to S.			S	10	2:45	8:50	15:15	21:20	●		Tu	10	4:10	10:15	16:30	22:35	
	W	10	0:40	7:10	13:20	19:40			S	11	3:45	9:45	16:00	22:15	E		W	11	4:55	10:55	17:10	23:10	
	Th	11	1:55	8:10	14:35	20:40		P	M	12	4:30	10:30	16:50	22:55			Th	12	5:30	11:25	17:50	23:45	
N	F	12	2:55	9:05	15:20	21:30		●	Tu	13	5:15	11:10	17:35	23:30			F	13	6:05	12:00	18:20	. . .	
	S	13	3:50	9:55	16:10	22:15			W	14	6:00	11:50	18:15	. . .					N to S.	S to N.	N to S.	S to N.	
●	S	14	4:35	10:40	17:05	23:05					N to S.	S to N.	N to S.	S to N.			S	14	0:15	6:45	12:35	19:00	
P	M	15	5:20	11:25	17:50	23:45		E	Th	15	0:05	6:30	12:25	18:55			S	15	0:50	7:25	13:15	19:45	
	Tu	16	6:15	12:05	18:35	. . .			F	16	0:45	7:10	13:00	19:30			M	16	1:35	8:15	14:10	20:35	
			N to S.	S to N.	N to S.	S to N.			S	17	1:25	7:55	13:45	20:20	☽		Tu	17	2:35	9:10	15:10	21:40	
	W	17	0:25	7:00	12:50	19:20			S	18	2:15	8:45	14:45	21:10	S		W	18	3:50	10:15	16:25	22:50	
E	Th	18	1:10	7:40	13:30	20:05		☽	M	19	3:15	9:40	15:50	22:15			Th	19	5:10	11:30	17:50	. . .	
	F	19	2:00	8:35	14:25	20:55			Tu	20	4:30	10:50	17:00	23:25					S to N.	N to S.	S to N.	N to S.	
☽	S	20	3:00	9:25	15:30	21:50			W	21	5:40	12:00	18:20	. . .			F	20	0:05	6:30	12:50	19:10	
	S	21	4:00	10:25	16:40	22:50					S to N.	N to S.	S to N.	N to S.	A		S	21	1:20	7:45	13:50	20:10	
	M	22	5:10	11:30	17:50	. . .		S	Th	22	0:40	7:05	13:20	19:45			S	22	2:20	8:35	14:45	20:55	
			S to N.	N to S.	S to N.	N to S.			F	23	1:50	8:10	14:25	20:35			M	23	3:00	9:10	15:20	21:30	
	Tu	23	0:00	6:20	12:40	19:00		A	S	24	2:45	8:55	15:05	21:15			Tu	24	3:35	9:40	15:50	22:00	
	W	24	1:10	7:40	13:54	20:05			S	25	3:30	9:35	15:45	21:55			W	25	4:05	10:15	16:20	22:30	
	Th	25	2:20	8:30	14:45	20:55			M	26	4:00	10:10	16:15	22:25	E		Th	26	4:35	10:40	16:55	23:00	
S	F	26	3:05	9:10	15:25	21:30		○	Tu	27	4:35	10:40	16:50	22:55	○		F	27	5:10	11:10	17:25	23:20	
	S	27	3:45	9:50	16:05	22:15			W	28	5:10	11:10	17:20	23:20			S	28	5:40	11:35	18:00	23:50	
○	S	28	4:25	10:30	16:45	22:45		E	Th	29	5:40	11:35	17:55	23:45			S	29	6:15	12:05	18:30	. . .	
A	M	29	5:05	11:05	17:15	23:15			F	30	6:10	12:00	18:20	. . .					N to S.	S to N.	N to S.	S to N.	
	Tu	30	5:40	11:30	17:50	23:45					N to S.	S to N.	N to S.	S to N.			M	30	0:20	6:50	12:40	19:10	
	W	31	6:05	12:00	18:20	. . .			S	31	0:10	6:40	12:30	18:55									

This table gives the predicted 135th meridian times of Middle Slack Water; 0^h is midnight, 12^h is noon; all hours less than 12 are in the forenoon (a. m.), all greater are in the afternoon (p. m.) and when diminished by 12 give the times after noon; for instance, 15:42 is 3:42 p. m. The heading "N to S" in the body of the table means that the current which had been setting toward the north before the time of slack water will begin to set southward shortly after that time; and "S to N" means exactly the reverse. Symbols and abbreviations relating to the moon: ●, new moon; ☽, 1st quar.; ○, full moon; ☾, 3d quar.; E, moon on the equator; N, S, moon farthest north or south of the equator (not to be confounded with the compass directions over the times of slack); A, P, moon in apogee or perigee. Slack water usually lasts from five to twenty minutes; those slacks which occur under the heading "N to S" are locally known as "High Water Slack," and those under "S to N" as "Low Water Slack," although high and low waters do not occur until about two hours later. The times in heavy-faced type are those which are most likely to be followed by a comparatively weak current. At weakest neap tides those with good local knowledge pass through Sergius Narrows at all stages of the current. The current at spring tides in Sergius Narrows attains an estimated velocity of 10 to 12 miles per hour in the narrowest and worst part of the Narrows, between Eureka Ledge and the north shore. When the current is running strong

SERGIUS NARROWS (Peril Strait), ALASKA, 1912.

TIMES OF SLACK WATER.

OCTOBER.							NOVEMBER.							DECEMBER.						
Moon.	Day of— W.	Day of— Mo.	Current turns from— N to S.	S to N.	N to S.	S to N.	Moon.	Day of— W.	Day of— Mo.	Current turns from— N to S.	S to N.	N to S.	S to N.	Moon.	Day of— W.	Day of— Mo.	Current turns from— N to S.	S to N.	N to S.	S to N.
	Tu	1	1:00	7:35	13:25	20:00	☾	F	1	3:00	9:40	15:45	22:15	☾	S	1	4:10	10:30	16:45	23:05
N	W	2	1:50	8:35	14:30	21:00		S	2	4:30	10:55	17:10	23:40	E	M	2	5:20	11:40	18:00	. . .
☾	Th	3	3:05	9:40	15:50	22:20	P	S	3	6:00	12:15	18:35	. . .				S to N.	N to S.	S to N.	N to S.
	F	4	4:40	11:05	17:25	23:50				S to N.	N to S.	S to N.	N to S.		Tu	3	0:15	6:40	12:45	19:10
	S	5	6:10	12:30	19:00	. . .		M	4	0:50	7:15	13:25	19:45		W	4	1:20	7:45	13:55	20:10
			S to N.	N to S.	S to N.	N to S.	E	Tu	5	2:00	8:15	14:25	20:35		Th	5	2:20	8:30	14:45	20:50
	S	6	1:20	7:40	13:55	20:15		W	6	2:45	8:55	15:05	21:15		F	6	3:00	9:10	15:25	21:30
P	M	7	2:25	8:35	14:50	21:00		Th	7	3:25	9:30	15:45	21:50		S	7	3:45	9:45	16:00	22:10
	Tu	8	3:15	9:20	15:35	21:40	●	F	8	4:00	10:10	16:15	22:25	●	S	8	4:20	10:25	16:40	22:45
E	W	9	3:50	10:00	16:05	22:15		S	9	4:40	10:40	17:00	23:00	S	M	9	5:05	11:05	17:20	23:20
●	Th	10	4:25	10:30	16:45	22:45		S	10	5:20	11:15	17:40	23:35		Tu	10	5:45	11:40	18:05	23:55
	F	11	5:05	11:05	17:20	23:20		M	11	6:00	11:50	18:20	. . .		W	11	6:25	12:15	18:45	. . .
	S	12	5:40	11:35	18:00	23:50				N to S.	S to N.	N to S.	S to N.				N to S.	S to N.	N to S.	S to N.
	S	13	6:15	12:10	18:40	. . .	S	Tu	12	0:10	6:45	12:35	19:00		Th	12	0:35	7:00	12:55	19:20
			N to S.	S to N.	N to S.	S to N.		W	13	0:50	7:25	13:25	19:50	A	F	13	1:15	7:45	13:35	20:05
	M	14	0:30	7:00	12:50	19:20		Th	14	1:40	8:15	14:10	20:40		S	14	2:00	8:35	14:30	20:50
S	Tu	15	1:10	7:45	13:35	20:10		F	15	2:40	9:10	15:15	21:40		S	15	2:50	9:15	15:20	21:40
	W	16	2:10	8:40	14:35	21:10	A	S	16	3:45	10:10	16:20	22:40	☽	M	16	3:50	10:10	16:20	22:30
☽	Th	17	3:20	9:45	15:50	22:15	☽	S	17	4:55	11:05	17:25	23:40	E	Tu	17	4:50	11:05	17:20	23:30
	F	18	4:30	10:55	17:10	23:30		M	18	6:00	12:05	18:25	. . .		W	18	5:50	12:00	18:20	. . .
A	S	19	5:50	12:05	18:25	. . .				S to N.	N to S.	S to N.	N to S.				S to N.	N to S.	S to N.	N to S.
			S to N.	N to S	S to N.	N to S.	E	Tu	19	0:40	7:00	13:05	19:25		Th	19	0:30	6:50	13:05	19:30
	S	20	0:35	7:00	13:05	19:25		W	20	1:30	7:50	14:00	20:15		F	20	1:30	7:50	14:00	20:20
	M	21	1:40	7:55	14:05	20:15		Th	21	2:20	8:35	14:45	20:55		S	21	2:30	8:45	14:55	21:05
	Tu	22	2:30	8:40	14:45	20:55		F	22	3:00	9:10	15:20	21:25		S	22	3:15	9:20	15:40	21:45
E	W	23	3:00	9:10	15:20	21:25		S	23	3:40	9:45	15:55	22:05	N	M	23	4:00	10:10	16:20	22:30
	Th	24	3:35	9:40	15:50	22:00	○	S	24	4:10	10:20	16:35	22:35	○	Tu	24	4:50	10:50	17:15	23:10
○	F	25	4:05	10:15	16:20	22:25		M	25	5:05	11:00	17:20	23:20	P	W	25	5:40	11:35	18:00	23:50
	S	26	4:40	10:45	17:00	23:00	N	Tu	26	5:45	11:40	18:05	. . .		Th	26	6:25	12:15	18:45	. . .
	S	27	5:20	11:15	17:35	23:30				N to S.	S to N.	N to S.	S to N.				N to S.	S to N.	N to S.	S to N.
	M	28	6:00	11:50	18:15	. . .		W	27	0:00	6:30	12:25	19:00		F	27	0:40	7:10	13:05	19:40
			N to S	S to N.	N to S.	S to N.	P	Th	28	0:45	7:25	13:15	19:50		S	28	1:30	8:05	14:00	20:30
	Tu	29	0:05	6:40	12:30	19:00		F	29	1:45	8:25	14:15	20:45	E	S	29	2:30	9:00	15:00	21:30
N	W	30	0:50	7:30	13:20	19:55		S	30	3:00	9:25	15:35	22:00	☾	M	30	3:30	9:50	16:00	22:30
	Th	31	1.45	8:30	14:30	21.00									Tu	31	4:45	11:00	17:15	23:30

It is not safe for any vessel, especially a large one, to pass from below Francis Rocks to above Liesnoi Shoal. During spring tide it is recommended to pass through only at or near the time of middle slack. The water at the strength of the current is very much disturbed, heaving up over the ledge in the middle and boiling and swirling in the channel, especially at the end where the water is passing out. The channel is so narrow and the current so variable in direction that if a vessel gets a sheer she may be carried on the reef or shore before she can be straightened out. The currents in Sergius Narrows are quite irregular (see the results obtained by Lieut. Commander E. K. Moore, U. S. N., given on page 501), and mariners are advised, therefore, to be on hand a sufficient time before the tabulated times (say half an hour or more), in order to make sure of the desired slack water, in case the predictions happen to be too late. If bound to the northward, a vessel should be on hand somewhat before the time given under "S to N" in the table, and if bound to the southward, somewhat before the time given under "N to S" in the table. There is about half an hour on each side of middle slack when any ordinary powered vessel can pass in perfect safety, especially if going with the current. Strangers should never vary from the rule of passing either way at the slack-water period, taking care to select a time of slack water which will be followed by a favorable current.

Seymour Narrows and Sergius Narrows.

In order to satisfy those who prefer using the old rules for obtaining the times of slack water, rather than the published predictions for Seymour Narrows and Sergius Narrows, the following rules are given here:

At Seymour Narrows, for high-water slacks add 4h 53m to Sitka time of high water, and for low-water slacks add 5h to Sitka time of low water. The result is in 120th meridian time without further correction. The mean duration of slack current is generally about 12m, but it varies from about 30m down to no slack.

At Sergius Narrows, for high-water slacks subtract 2h from Sitka time of high water, and for low-water slacks subtract 2h from Sitka time of low water. The mean duration of slack current is from 5m to 20m. At the end of high-water slack the current turns and flows southward through Sergius Narrows for about six hours, or until low-water slack, after which the current turns and flows northward for about six hours. The high and low tides occur nearly two hours after slack waters.

The following tables and remarks were compiled by Lieut. Commander E. K. Moore, U. S. N., Assistant, U. S. C. & G. S., from the current observations he obtained in 1897 at Seymour Narrows, British Columbia, and Sergius Narrows, Alaska.

Seymour Narrows.

	h.	m.
Mean time of slack after higher H.W. Sitka. (58 Obs.)	4	45
Mean variation from 4h 45m		10
Extreme variation 24m earlier to 1h 00m later	1	24
Mean time of slack after lower H.W. Sitka. (145 Obs.)	4	50
Mean variation from 4h 50m		17
Extreme variation 35m earlier to 54m later	1	29
Mean time of slack after all high waters. Sitka. (203 Obs.)	4	48
Mean variation from 4h 48m		15
Extreme variation 33m earlier to 57m later	1	30
Mean time of slack after lower L.W. Sitka. (122 Obs.)	4	28
Mean variation from 4h 28m		14
Extreme variation 28m earlier to 1h 02m later	1	30
Mean time of slack after higher L.W. Sitka. (53 Obs.)	5	41
Mean variation from 5h 41m		35
Extreme variation 1h 15m earlier to 1h 27m later	2	42
Mean time of slack after all low waters. Sitka. (175 Obs.)	4	51
Mean variation from 4h 51m		36
Extreme variation 51m earlier to 2h 17m later	3	08
Mean time of slack after all H. and L. waters. Sitka. (378 Obs.)	4	50
Mean of the variation from 4h 50m		23
Extreme variation 50m earlier to 2h 19m later	3	08
Mean duration of slack water		13
Variation of duration of slack water	6m to	0 19

The time used at Seymour Narrows is 120th meridian, and that at Sitka 135th meridian, so that, to make use of the table, take the time of high or low water from the Sitka table, add the difference shown by this table, and the time will be that of slack water in 120th meridian, or Puget Sound time.

The mean time of slack after higher low water is large and the variation is also large, but this constant is unimportant, as it is calculated on the tide which has the least change in water level, consequently the weakest current, and except at the largest springs a steamer can pass at any time during this tide.

The interval is generally shorter at or about the spring tides and longer at or about the neaps. A vessel requiring slack water should be on hand at the limit of the variation, and wait if the current is running too strong.

Sergius Narrows.

	h.	m.
Mean time of slack before higher H. W. Sitka. (87 Obs.)	1	35
Mean of the variations from 1h 35m		19
Extreme variations 47m earlier to 47m later	1	34
Mean time of slack before lower H. W. Sitka. (120 Obs.)	2	18
Mean of the variations from 2h 18m		14
Extreme variations 47m earlier to 55m later	1	42
Mean time of slack before all high waters. Sitka. (207 Obs.)	2	00
Mean of the variations from 2h 00m		24
Extreme variations 1h 05m earlier to 1h 09m later	2	14
Mean time of slack before lower L. W. Sitka. (99 Obs.)	2	00
Mean of the variations from 2h 00m		11
Extreme variations 21m earlier to 25m later		46
Mean time of slack before higher L. W. Sitka. (135 Obs.)	1	27
Mean of variations from 1h 27m		11
Extreme variations 36m earlier to 40m later	1	16
Mean time of slack before all low waters. Sitka. (234 Obs.)	1	41
Mean of the variations from 1h 41m		17
Extreme variations 40m earlier to 54m later	1	34
Mean time of slack before all H. and L. W. Sitka. (441 Obs.)	1	50
Mean of the variations from 1h 50m		24
Extreme variations 1h 15m earlier to 1h 03m later	2	18
Mean duration of slack water		03
Variation of the above is practically		00
Mean duration of weak current not exceeding 2 knots. (414 Obs.)		50
Variation of the same	9m to 2	00

When the difference shown by this table is subtracted from the time of high or low water at Sitka, the time will be that of slack water at Sergius Narrows, in 135th meridian time.

All the larger variations of the above table occurred at or near neap tides, when the current was weak and the time of absolute slack was not important. At or about spring tides the variation seldom exceeded 10 minutes.

Georgia Strait, British Columbia.

To find the approximate 120th meridian time of *slack water:*

(1) At Race Passage, for the large tides, take Port Townsend time of high tide for higher high water slack, and add 55 minutes to the times of low tide for lower low water slack. For small tides add 1 hour 20 minutes to Port Townsend times of tide for lower high and higher low water slacks.

NOTE.—At Race Passage it has been observed that the ebb stream has frequently run, during small tides, the whole time the tide was rising by the shore.

(2) At East Point, take the Port Townsend time of high tide for higher high water slack, and add 1 hour 30 minutes to the time of low tide for lower low water slack.

(3) At Active Pass, add 20 minutes to the Port Townsend time of high tide for higher high water slack, and add 1 hour to the time of low tide for lower low water slack. The greatest velocity of the current is 4 to 7 knots.

(4) At Portier Pass, subtract 15 minutes from the Port Townsend time of high tide for higher high water slack, and add 50 minutes to the time of low tide for lower low water slack. The greatest velocity of the current is 4 to 9 knots.

(5) At Dodd Narrows, for the large tides, subtract 15 minutes from Port Townsend time of high tide for higher high water slack, and add 35 minutes to the time of low tide for lower low water slacks. For small tides take Port Townsend time of tide for high or low water slack. The greatest velocity of the current is 6 to 9 knots.

(6) At Burrard Inlet, First Narrows, add 2 hours and 30 minutes to the large tides and 2 hours to the small tides at Port Townsend. The greatest velocity of the current is 6 to 8 knots.

(7) At Yuculta Rapids, Stuart Island, for large tides take Port Townsend time of tide for high and low water slacks. For small tides add 1 hour and 30 minutes to the Port Townsend times to obtain high or low water slack.

(8) At Hole in the Wall, add 45 minutes to Port Townsend time of tide.

(9) At Seechelt Rapids, add 4 hours 30 minutes to the Port Townsend time of the large tides and 4 hours to the time of the small tides.

NOTE.—The time of slack water for small tides is more uncertain than for the large tides.

These rules were furnished by Capt. J. T. Walbran, commanding D. G. S. *Quadra*.

Chatham Strait, Alaska.

To find the approximate 135th meridian time of *slack water:*

At Killisnoo, Kootznahoo Roads, add 3 hours to the Sitka time of the higher high waters, and add 2 hours to the time of all other tides. The current turns from ESE. to WNW. between high and low water, and from WNW. to ESE. between low and high water.

TABLE 10.—MEAN LOCAL TIME OF SUN RISE AND SUN SET.

Declination.	Approx. date.	North Latitude.														
		0°	2°	4°	6°	8°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 05 S	Jan. 1	5 59	6 02	6 06	6 10	6 14	6 17	6 19	6 20	6 22	6 24	6 26	6 28	6 30	6 32	6 33	6 35
22 37	6	6 02	6 05	6 09	6 11	6 15	6 18	6 21	6 22	6 24	6 26	6 28	6 29	6 31	6 33	6 35	6 36
21 58	11	6 04	6 07	6 11	6 14	6 17	6 20	6 22	6 23	6 25	6 27	6 29	6 30	6 32	6 34	6 36	6 37
21 08	16	6 06	6 09	6 12	6 15	6 18	6 21	6 23	6 24	6 26	6 28	6 30	6 31	6 33	6 34	6 36	6 38
20 07	21	6 07	6 10	6 12	6 16	6 19	6 22	6 24	6 25	6 27	6 28	6 30	6 31	6 33	6 34	6 36	6 38
18 58	26	6 09	6 12	6 14	6 17	6 20	6 22	6 24	6 25	6 27	6 28	6 30	6 31	6 32	6 34	6 35	6 37
17 39 S	31	6 10	6 13	6 15	6 17	6 20	6 22	6 24	6 25	6 26	6 28	6 29	6 30	6 32	6 33	6 34	6 36
16 13 S	Feb. 5	6 10	6 13	6 15	6 17	6 20	6 22	6 23	6 24	6 25	6 27	6 28	6 29	6 30	6 32	6 32	6 34
14 40	10	6 11	6 13	6 15	6 17	6 19	6 21	6 22	6 23	6 24	6 25	6 26	6 27	6 28	6 29	6 30	6 32
13 01	15	6 11	6 13	6 14	6 16	6 18	6 20	6 20	6 22	6 22	6 23	6 24	6 25	6 26	6 27	6 28	6 29
11 16	20	6 10	6 12	6 13	6 15	6 16	6 18	6 18	6 20	6 20	6 21	6 22	6 23	6 23	6 24	6 25	6 26
9 28 S	25	6 10	6 11	6 12	6 13	6 14	6 16	6 16	6 18	6 18	6 18	6 19	6 20	6 20	6 21	6 22	6 22
7 30 S	Mar. 2	6 09	6 10	6 11	6 12	6 12	6 14	6 14	6 15	6 15	6 16	6 16	6 17	6 17	6 18	6 18	6 19
5 34	7	6 08	6 08	6 09	6 10	6 10	6 11	6 11	6 12	6 12	6 12	6 13	6 13	6 14	6 14	6 14	6 15
3 37	12	6 06	6 06	6 07	6 08	6 08	6 09	6 09	6 09	6 09	6 09	6 10	6 10	6 10	6 10	6 10	6 11
1 39 S	17	6 05	6 05	6 05	6 06	6 05	6 06	6 06	6 06	6 06	6 06	6 06	6 06	6 06	6 06	6 06	6 06
0 20 N	22	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 02	6 02	6 02	6 02	6 02	6 02	6 02	6 02
2 18 N	27	6 02	6 01	6 01	6 01	6 00	6 00	6 00	5 59	5 59	5 59	5 59	5 58	5 58	5 58	5 58	5 58
4 15 N	Apr. 1	6 00	6 00	5 59	5 58	5 58	5 57	5 56	5 56	5 56	5 55	5 55	5 55	5 54	5 54	5 54	5 53
6 09	6	5 59	5 58	5 57	5 56	5 55	5 54	5 54	5 53	5 53	5 52	5 52	5 51	5 50	5 50	5 50	5 49
8 02	11	5 57	5 56	5 55	5 55	5 53	5 52	5 51	5 50	5 49	5 49	5 48	5 48	5 47	5 46	5 46	5 45
9 51	16	5 56	5 54	5 53	5 52	5 50	5 49	5 48	5 47	5 46	5 46	5 45	5 44	5 43	5 42	5 42	5 41
11 35	21	5 55	5 53	5 52	5 51	5 49	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37
13 15 N	26	5 54	5 52	5 50	5 48	5 46	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34
14 50 N	May 1	5 53	5 51	5 49	5 47	5 44	5 42	5 41	5 40	5 39	5 38	5 36	5 35	5 34	5 33	5 32	5 31
16 19	6	5 53	5 51	5 49	5 45	5 43	5 41	5 39	5 38	5 37	5 36	5 34	5 33	5 32	5 30	5 29	5 28
17 42	11	5 52	5 50	5 47	5 44	5 42	5 39	5 38	5 36	5 35	5 34	5 32	5 31	5 30	5 28	5 26	5 25
18 55	16	5 52	5 50	5 47	5 44	5 41	5 38	5 37	5 35	5 34	5 32	5 31	5 29	5 28	5 26	5 25	5 23
19 58	21	5 52	5 50	5 46	5 44	5 40	5 38	5 36	5 34	5 33	5 31	5 30	5 28	5 26	5 25	5 23	5 21
21 00	26	5 53	5 50	5 47	5 44	5 40	5 37	5 36	5 34	5 32	5 31	5 29	5 27	5 25	5 24	5 22	5 20
21 48 N	31	5 53	5 50	5 47	5 44	5 40	5 37	5 35	5 34	5 32	5 30	5 28	5 27	5 25	5 23	5 21	5 19
22 28 N	June 5	5 54	5 51	5 48	5 44	5 41	5 37	5 36	5 34	5 32	5 30	5 28	5 26	5 25	5 22	5 21	5 19
22 57	10	5 55	5 52	5 48	5 45	5 41	5 38	5 36	5 34	5 32	5 31	5 29	5 27	5 25	5 23	5 21	5 19
23 17	15	5 56	5 53	5 49	5 46	5 42	5 38	5 37	5 35	5 33	5 31	5 30	5 28	5 26	5 24	5 22	5 20
23 26	20	5 57	5 54	5 50	5 47	5 43	5 39	5 38	5 36	5 34	5 32	5 31	5 29	5 27	5 25	5 23	5 21
23 25	25	5 58	5 55	5 51	5 48	5 44	5 41	5 39	5 37	5 35	5 33	5 32	5 30	5 28	5 26	5 24	5 22
23 14 N	30	5 59	5 56	5 52	5 49	5 46	5 42	5 40	5 38	5 36	5 35	5 33	5 31	5 29	5 27	5 25	5 23
22 52 N	July 5	6 00	5 57	5 54	5 50	5 47	5 43	5 42	5 39	5 38	5 36	5 34	5 32	5 30	5 29	5 27	5 25
22 21	10	6 01	5 58	5 55	5 51	5 48	5 44	5 43	5 40	5 39	5 36	5 36	5 34	5 32	5 30	5 28	5 27
21 40	15	6 02	5 59	5 55	5 52	5 49	5 45	5 44	5 42	5 41	5 39	5 37	5 36	5 34	5 32	5 30	5 28
20 50	20	6 02	5 59	5 56	5 53	5 50	5 47	5 45	5 44	5 42	5 40	5 39	5 37	5 36	5 34	5 32	5 30
19 50	25	6 02	6 00	5 57	5 54	5 51	5 48	5 46	5 45	5 43	5 42	5 40	5 39	5 37	5 36	5 34	5 32
18 43 N	30	6 02	6 00	5 57	5 55	5 52	5 49	5 47	5 46	5 44	5 43	5 42	5 40	5 39	5 37	5 36	5 34
17 28 N	Aug. 4	6 02	6 00	5 57	5 55	5 52	5 49	5 48	5 47	5 46	5 44	5 43	5 42	5 40	5 39	5 37	5 35
16 06	9	6 02	5 59	5 57	5 55	5 52	5 50	5 49	5 48	5 46	5 45	5 44	5 43	5 41	5 40	5 39	5 38
14 37	14	6 01	5 59	5 57	5 54	5 52	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 40	5 39
13 03	19	6 00	5 58	5 56	5 54	5 52	5 50	5 50	5 48	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41
11 23	24	5 59	5 57	5 55	5 54	5 52	5 50	5 50	5 49	5 48	5 47	5 46	5 46	5 45	5 44	5 43	5 42
9 39 N	29	5 57	5 56	5 54	5 53	5 52	5 50	5 50	5 49	5 48	5 48	5 47	5 46	5 46	5 45	5 44	5 43
7 51 N	Sept. 3	5 56	5 54	5 53	5 52	5 51	5 50	5 50	5 49	5 48	5 48	5 47	5 47	5 46	5 46	5 45	5 44
6 00	8	5 54	5 53	5 52	5 52	5 51	5 50	5 50	5 49	5 49	5 48	5 48	5 47	5 47	5 46	5 46	5 46
4 07	13	5 52	5 52	5 51	5 51	5 50	5 49	5 49	5 49	5 49	5 48	5 48	5 48	5 48	5 47	5 47	5 47
2 11	18	5 51	5 51	5 50	5 50	5 49	5 49	5 49	5 49	5 49	5 48	5 48	5 48	5 48	5 48	5 48	5 48
0 15 N	23	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49
1 42 S	28	5 47	5 47	5 48	5 48	5 48	5 48	5 48	5 49	5 49	5 49	5 49	5 49	5 49	5 50	5 50	5 50
3 39 S	Oct. 3	5 45	5 46	5 46	5 47	5 48	5 48	5 48	5 49	5 49	5 49	5 50	5 50	5 50	5 51	5 51	5 51
5 35	8	5 44	5 45	5 46	5 47	5 47	5 48	5 48	5 49	5 49	5 50	5 50	5 51	5 51	5 52	5 52	5 52
7 28	13	5 43	5 44	5 45	5 46	5 47	5 48	5 49	5 49	5 50	5 50	5 51	5 52	5 52	5 53	5 53	5 54
9 20	18	5 42	5 43	5 44	5 46	5 47	5 48	5 49	5 50	5 50	5 51	5 52	5 53	5 53	5 54	5 55	5 56
11 08	23	5 41	5 42	5 44	5 46	5 47	5 49	5 50	5 51	5 51	5 52	5 53	5 54	5 55	5 56	5 57	5 58
12 51 S	28	5 40	5 42	5 44	5 46	5 47	5 49	5 51	5 52	5 52	5 54	5 54	5 56	5 56	5 58	5 59	6 00
14 30 S	Nov. 2	5 40	5 42	5 44	5 46	5 48	5 50	5 52	5 53	5 54	5 55	5 56	5 57	5 58	6 00	6 01	6 02
16 03	7	5 40	5 42	5 45	5 47	5 49	5 52	5 53	5 54	5 56	5 57	5 58	5 59	6 00	6 02	6 03	6 04
17 29	12	5 40	5 43	5 46	5 48	5 51	5 53	5 55	5 56	5 57	5 59	6 00	6 01	6 03	6 04	6 06	6 07
18 48	17	5 41	5 44	5 47	5 50	5 52	5 55	5 57	5 58	6 00	6 01	6 02	6 04	6 05	6 07	6 08	6 10
19 58	22	5 42	5 45	5 48	5 51	5 54	5 57	5 59	6 00	6 02	6 04	6 05	6 07	6 08	6 10	6 11	6 12
20 59 S	27	5 44	5 47	5 50	5 54	5 56	5 59	6 01	6 02	6 04	6 06	6 08	6 09	6 11	6 13	6 14	6 16
21 51 S	Dec. 2	5 45	5 49	5 52	5 56	5 59	6 01	6 03	6 05	6 07	6 09	6 10	6 12	6 14	6 16	6 18	6 19
22 32	7	5 47	5 51	5 54	5 58	6 01	6 04	6 06	6 08	6 10	6 12	6 13	6 15	6 17	6 19	6 21	6 22
23 02	12	5 50	5 53	5 57	6 00	6 04	6 07	6 09	6 11	6 12	6 14	6 16	6 18	6 20	6 22	6 24	6 25
23 20	17	5 52	5 56	5 59	6 03	6 06	6 09	6 11	6 13	6 15	6 17	6 19	6 21	6 23	6 24	6 26	6 28
23 27	22	5 54	5 58	6 02	6 05	6 09	6 12	6 14	6 16	6 18	6 20	6 22	6 23	6 25	6 27	6 29	6 31
23 22 S	27	5 57	6 01	6 04	6 08	6 11	6 14	6 16	6 18	6 20	6 22	6 24	6 26	6 28	6 29	6 31	6 33
23 05 S	Jan. 1	5 59	6 02	6 06	6 10	6 14	6 17	6 19	6 20	6 22	6 24	6 26	6 28	6 30	6 32	6 33	6 35

Declination.	Approx. date.	*North Latitude.*															
		0°	2°	4°	6°	8°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 03 S	Jan. 1	6 08	6 06	6 01	5 57	5 53	5 50	5 49	5 48	5 46	5 44	5 42	5 40	5 38	5 37	5 35	5 33
22 34	6	6 10	6 07	6 04	5 59	5 56	5 53	5 52	5 50	5 49	5 47	5 45	5 43	5 42	5 40	5 38	5 36
21 58	11	6 12	6 09	6 06	6 03	6 00	5 56	5 55	5 53	5 51	5 50	5 48	5 46	5 45	5 43	5 41	5 39
21 02	16	6 14	6 11	6 08	6 04	6 01	5 58	5 57	5 56	5 54	5 52	5 51	5 49	5 48	5 46	5 44	5 43
20 01	21	6 15	6 12	6 09	6 07	6 04	6 01	6 00	5 58	5 57	5 55	5 54	5 52	5 50	5 49	5 47	5 46
18 50	26	6 16	6 13	6 10	6 09	6 06	6 03	6 02	6 00	5 59	5 58	5 56	5 55	5 53	5 52	5 50	5 49
17 31 S	31	6 17	6 14	6 12	6 10	6 08	6 05	6 04	6 08	6 01	6 00	5 59	5 58	5 56	5 55	5 53	5 52
16 04 S	Feb. 5	6 18	6 16	6 14	6 10	6 08	6 06	6 06	6 04	6 03	6 02	6 01	6 00	5 58	5 57	5 56	5 55
14 30	10	6 18	6 16	6 14	6 12	6 10	6 08	6 07	6 06	6 04	6 04	6 02	6 02	6 00	5 59	5 58	5 58
12 51	15	6 18	6 16	6 14	6 13	6 11	6 09	6 08	6 07	6 06	6 06	6 05	6 04	6 03	6 02	6 01	6 00
11 06	20	6 18	6 16	6 14	6 13	6 12	6 10	6 09	6 08	6 08	6 07	6 06	6 05	6 05	6 04	6 03	6 02
9 16 S	25	6 17	6 16	6 14	6 13	6 12	6 11	6 10	6 09	6 09	6 08	6 08	6 07	6 06	6 05	6 04	6 04
7 18 S	Mar. 2	6 16	6 15	6 14	6 13	6 12	6 11	6 11	6 10	6 10	6 09	6 09	6 08	6 08	6 07	6 06	6 06
5 23	7	6 15	6 14	6 13	6 13	6 12	6 11	6 11	6 10	6 10	6 10	6 09	6 09	6 09	6 08	6 08	6 08
3 25	12	6 14	6 13	6 12	6 12	6 12	6 11	6 11	6 11	6 11	6 10	6 10	6 10	6 10	6 10	6 09	6 09
1 27 S	17	6 12	6 12	6 12	6 12	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11
0 32 N	22	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 12	6 12	6 12	6 12	6 12	6 12
2 30 N	27	6 09	6 09	6 10	6 10	6 10	6 11	6 11	6 11	6 12	6 12	6 12	6 12	6 13	6 13	6 13	6 13
4 26 N	Apr. 1	6 08	6 09	6 10	6 10	6 10	6 11	6 11	6 12	6 12	6 12	6 13	6 13	6 14	6 14	6 14	6 15
6 21	6	6 06	6 07	6 08	6 09	6 10	6 11	6 11	6 12	6 12	6 13	6 13	6 14	6 14	6 15	6 16	6 16
8 13	11	6 05	6 06	6 07	6 08	6 10	6 11	6 11	6 12	6 13	6 13	6 14	6 15	6 15	6 16	6 17	6 17
10 01	16	6 04	6 06	6 07	6 08	6 09	6 11	6 12	6 12	6 13	6 14	6 15	6 16	6 16	6 17	6 18	6 19
11 46	21	6 03	6 05	6 07	6 08	6 09	6 11	6 12	6 13	6 14	6 15	6 16	6 17	6 18	6 18	6 19	6 20
13 25 N	26	6 02	6 04	6 06	6 07	6 09	6 11	6 12	6 13	6 14	6 16	6 17	6 18	6 19	6 20	6 21	6 22
14 59 N	May 1	6 01	6 04	6 06	6 07	6 10	6 12	6 13	6 14	6 15	6 16	6 18	6 19	6 20	6 21	6 22	6 24
16 27	6	6 00	6 03	6 05	6 08	6 10	6 12	6 14	6 15	6 16	6 18	6 19	6 20	6 22	6 23	6 24	6 26
17 48	11	6 00	6 03	6 05	6 08	6 11	6 13	6 15	6 16	6 18	6 19	6 20	6 22	6 23	6 25	6 26	6 28
19 02	16	6 00	6 03	6 06	6 09	6 12	6 14	6 16	6 17	6 19	6 20	6 21	6 23	6 25	6 26	6 28	6 30
20 04	21	6 00	6 03	6 06	6 09	6 12	6 15	6 17	6 18	6 20	6 22	6 23	6 25	6 26	6 28	6 30	6 32
21 05	26	6 01	6 04	6 07	6 10	6 13	6 17	6 18	6 20	6 22	6 23	6 25	6 27	6 28	6 30	6 32	6 34
21 53 N	31	6 01	6 05	6 08	6 11	6 14	6 18	6 20	6 21	6 23	6 25	6 26	6 28	6 30	6 32	6 34	6 36
22 31 N	June 5	6 02	6 06	6 09	6 12	6 16	6 19	6 21	6 23	6 25	6 26	6 28	6 30	6 32	6 34	6 36	6 38
23 00	10	6 03	6 07	6 10	6 13	6 16	6 20	6 22	6 24	6 26	6 28	6 30	6 32	6 34	6 36	6 37	6 39
23 18	15	6 04	6 08	6 11	6 15	6 18	6 22	6 24	6 26	6 27	6 29	6 31	6 33	6 35	6 37	6 39	6 41
23 26	20	6 05	6 09	6 12	6 16	6 20	6 23	6 25	6 27	6 29	6 30	6 32	6 34	6 36	6 38	6 40	6 42
23 24	25	6 06	6 10	6 14	6 17	6 21	6 24	6 26	6 28	6 30	6 31	6 33	6 35	6 37	6 39	6 41	6 43
23 12 N	30	6 07	6 11	6 14	6 18	6 21	6 25	6 27	6 28	6 30	6 32	6 34	6 36	6 38	6 40	6 42	6 44
22 50 N	July 5	6 08	6 12	6 15	6 19	6 22	6 25	6 27	6 29	6 31	6 32	6 34	6 36	6 38	6 40	6 42	6 44
22 17	10	6 09	6 12	6 16	6 19	6 22	6 26	6 27	6 29	6 31	6 33	6 34	6 36	6 38	6 40	6 42	6 44
21 35	15	6 10	6 13	6 16	6 19	6 22	6 26	6 27	6 29	6 31	6 32	6 34	6 36	6 38	6 39	6 41	6 43
20 44	20	6 10	6 13	6 16	6 19	6 22	6 25	6 27	6 28	6 30	6 32	6 33	6 35	6 37	6 38	6 40	6 42
19 44	25	6 10	6 13	6 16	6 20	6 23	6 25	6 27	6 27	6 29	6 31	6 32	6 34	6 35	6 37	6 38	6 40
18 36 N	30	6 10	6 13	6 15	6 19	6 22	6 24	6 26	6 26	6 28	6 29	6 31	6 32	6 34	6 35	6 36	6 38
17 20 N	Aug. 4	6 10	6 12	6 15	6 18	6 21	6 23	6 24	6 25	6 26	6 27	6 29	6 30	6 31	6 33	6 34	6 36
15 57	9	6 09	6 11	6 14	6 17	6 19	6 21	6 23	6 23	6 24	6 25	6 26	6 28	6 29	6 30	6 31	6 33
14 28	14	6 08	6 10	6 12	6 15	6 17	6 19	6 21	6 21	6 22	6 23	6 24	6 25	6 26	6 27	6 28	6 29
12 53	19	6 07	6 09	6 11	6 13	6 15	6 17	6 18	6 18	6 19	6 20	6 21	6 22	6 23	6 24	6 25	6 26
11 13	24	6 06	6 07	6 09	6 10	6 12	6 14	6 15	6 15	6 16	6 17	6 18	6 18	6 19	6 20	6 21	6 22
9 29 N	29	6 05	6 07	6 08	6 09	6 11	6 12	6 13	6 12	6 13	6 14	6 14	6 15	6 16	6 16	6 17	6 18
7 40 N	Sept. 3	6 08	6 04	6 05	6 07	6 08	6 09	6 09	6 09	6 10	6 10	6 11	6 11	6 12	6 12	6 13	6 14
5 49	8	6 02	6 03	6 04	6 04	6 05	6 06	6 06	6 06	6 06	6 07	6 07	6 07	6 08	6 08	6 09	6 09
3 55	13	6 00	6 00	6 00	6 02	6 02	6 03	6 03	6 02	6 02	6 03	6 03	6 03	6 04	6 04	6 04	6 05
2 00	18	5 58	5 58	5 58	5 58	5 58	5 59	5 59	5 59	5 59	5 59	5 59	6 00	6 00	6 00	6 00	6 00
0 03 N	23	5 56	5 56	5 56	5 56	5 56	5 56	5 56	5 56	5 56	5 56	5 56	5 56	5 56	5 56	5 56	5 56
1 54 S	28	5 55	5 55	5 54	5 53	5 53	5 53	5 52	5 52	5 52	5 52	5 52	5 52	5 52	5 51	5 51	5 51
3 51 S	Oct. 3	5 53	5 53	5 52	5 51	5 50	5 50	5 50	5 49	5 49	5 49	5 49	5 48	5 48	5 48	5 47	5 47
5 46	8	5 52	5 51	5 50	5 48	5 48	5 47	5 46	5 46	5 45	5 45	5 44	5 44	5 44	5 43	5 43	5 42
7 40	13	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 42	5 41	5 41	5 40	5 39	5 39	5 38
9 31	18	5 49	5 48	5 46	5 45	5 44	5 42	5 41	5 40	5 40	5 39	5 38	5 38	5 37	5 35	5 35	5 34
11 18	23	5 48	5 46	5 45	5 43	5 41	5 40	5 39	5 38	5 37	5 36	5 36	5 35	5 34	5 33	5 32	5 31
13 02 S	28	5 48	5 46	5 44	5 42	5 40	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28
14 40 S	Nov. 2	5 48	5 45	5 43	5 41	5 39	5 37	5 36	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 26	5 25
16 12	7	5 48	5 45	5 43	5 41	5 38	5 36	5 35	5 33	5 32	5 31	5 30	5 28	5 27	5 26	5 24	5 23
17 38	12	5 48	5 46	5 43	5 40	5 38	5 35	5 34	5 32	5 31	5 30	5 29	5 27	5 26	5 24	5 23	5 21
18 55	17	5 49	5 46	5 44	5 41	5 38	5 35	5 34	5 32	5 31	5 29	5 28	5 26	5 25	5 23	5 22	5 20
20 05	22	5 50	5 47	5 45	5 41	5 38	5 35	5 34	5 32	5 31	5 29	5 28	5 26	5 24	5 23	5 21	5 20
21 05 S	27	5 52	5 49	5 46	5 42	5 39	5 36	5 35	5 33	5 31	5 30	5 28	5 26	5 25	5 23	5 21	5 20
21 55 S	Dec. 2	5 53	5 49	5 47	5 43	5 40	5 37	5 36	5 34	5 32	5 31	5 29	5 27	5 25	5 24	5 22	5 20
22 35	7	5 55	5 51	5 49	5 45	5 42	5 39	5 37	5 36	5 34	5 32	5 30	5 28	5 27	5 25	5 23	5 21
23 04	12	5 58	5 55	5 52	5 47	5 44	5 41	5 39	5 37	5 36	5 34	5 32	5 30	5 28	5 26	5 24	5 23
23 21	17	6 00	5 56	5 53	5 50	5 47	5 43	5 41	5 40	5 38	5 36	5 34	5 32	5 30	5 28	5 27	5 25
23 27	22	6 03	6 00	5 56	5 52	5 48	5 45	5 43	5 42	5 40	5 38	5 36	5 35	5 33	5 31	5 29	5 27
23 21 S	27	6 05	6 01	5 58	5 55	5 52	5 48	5 46	5 45	5 43	5 41	5 39	5 37	5 35	5 34	5 32	5 30
23 03 S	Jan. 1	6 08	6 05	6 01	5 57	5 53	5 50	5 49	5 48	5 46	5 44	5 42	5 40	5 38	5 37	5 35	5 33

Declination.	Approx. date.	North Latitude.														
		21°	22°	23°	24°	25°	26°	27°	28°	29°	30°	31°	32°	33°	34°	35°	36°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 05 S	Jan. 1	6 37	6 39	6 41	6 43	6 45	6 47	6 49	6 51	6 54	6 56	6 58	7 01	7 03	7 05	7 08	7 10
22 37	6	6 38	6 40	6 42	6 44	6 46	6 48	6 50	6 52	6 55	6 57	6 59	7 01	7 04	7 06	7 08	7 11
21 58	11	6 39	6 41	6 43	6 45	6 47	6 49	6 51	6 53	6 55	6 57	6 59	7 01	7 04	7 06	7 08	7 11
21 08	16	6 40	6 41	6 43	6 45	6 47	6 49	6 50	6 52	6 54	6 56	6 58	7 00	7 02	7 05	7 07	7 09
20 07	21	6 39	6 41	6 43	6 44	6 46	6 48	6 49	6 51	6 53	6 56	6 57	6 59	7 01	7 03	7 05	7 07
18 58	26	6 38	6 40	6 42	6 43	6 45	6 46	6 48	6 50	6 52	6 53	6 55	6 57	6 59	7 01	7 02	7 04
17 39 S	31	6 37	6 38	6 40	6 41	6 43	6 44	6 46	6 48	6 49	6 51	6 52	6 54	6 56	6 58	7 00	7 02
16 13 S	Feb. 5	6 35	6 36	6 38	6 39	6 41	6 42	6 43	6 45	6 46	6 48	6 49	6 51	6 52	6 54	6 55	6 57
14 40	10	6 33	6 34	6 35	6 36	6 38	6 39	6 40	6 41	6 42	6 43	6 44	6 46	6 48	6 49	6 50	6 52
13 01	15	6 30	6 31	6 32	6 33	6 34	6 35	6 36	6 37	6 38	6 40	6 41	6 42	6 43	6 44	6 45	6 46
11 16	20	6 27	6 28	6 29	6 30	6 31	6 32	6 33	6 34	6 35	6 36	6 37	6 38	6 39	6 40	6 41	6 42
9 28 S	25	6 23	6 24	6 24	6 25	6 26	6 27	6 28	6 28	6 29	6 30	6 31	6 32	6 33	6 34	6 35	6 36
7 30 S	Mar. 2	6 19	6 20	6 20	6 21	6 22	6 22	6 23	6 23	6 24	6 25	6 25	6 26	6 26	6 27	6 28	6 29
5 34	7	6 15	6 16	6 16	6 16	6 17	6 17	6 18	6 18	6 18	6 19	6 19	6 20	6 20	6 20	6 21	6 21
3 37	12	6 11	6 11	6 11	6 12	6 12	6 12	6 12	6 13	6 13	6 13	6 13	6 14	6 14	6 14	6 14	6 14
1 39 S	17	6 06	6 06	6 06	6 07	6 07	6 07	6 07	6 07	6 07	6 07	6 07	6 07	6 07	6 07	6 07	6 07
0 20 N	22	6 02	6 02	6 02	6 02	6 01	6 01	6 01	6 01	6 01	6 01	6 01	6 01	6 00	6 00	6 00	6 00
2 18 N	27	5 57	5 57	5 57	5 57	5 56	5 56	5 56	5 56	5 55	5 55	5 55	5 54	5 54	5 53	5 53	5 52
4 15 N	Apr. 1	5 53	5 52	5 52	5 52	5 51	5 51	5 50	5 50	5 49	5 49	5 48	5 48	5 47	5 46	5 46	5 45
6 09	6	5 48	5 48	5 47	5 47	5 46	5 45	5 45	5 44	5 44	5 43	5 42	5 42	5 41	5 40	5 39	5 38
8 02	11	5 44	5 43	5 42	5 42	5 41	5 40	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31
9 51	16	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 34	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 24
11 35	21	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 28	5 27	5 26	5 25	5 24	5 22	5 21	5 20	5 18
13 15 N	26	5 32	5 31	5 30	5 29	5 28	5 26	5 25	5 24	5 22	5 21	5 20	5 18	5 17	5 15	5 13	5 12
14 50 N	May 1	5 29	5 28	5.26	5 25	5 24	5 22	5 21	5 20	5 18	5 16	5 15	5 13	5 12	5 10	5 08	5 06
16 19	6	5 26	5 25	5 23	5 22	5 20	5 19	5 17	5 16	5 14	5 12	5 11	5 09	5 07	5 05	5 03	5 01
17 42	11	5 24	5 22	5 20	5 19	5 17	5 15	5 14	5 12	5 10	5 08	5 07	5 05	5 03	5 01	4 58	4 56
18 55	16	5 21	5 20	5 18	5 16	5 15	5 13	5 11	5 09	5 07	5 05	5 03	5 01	4 59	4 57	4 55	4 52
19 58	21	5 20	5 18	5 16	5 14	5 12	5 10	5 09	5 07	5 05	5 02	5 00	4 58	4 56	4 54	4 51	4 49
21 00	26	5 19	5 17	5 15	5 13	5 11	5 09	5 07	5 05	5 02	5 00	4 58	4 56	4 54	4 51	4 49	4 46
21 48 N	31	5 18	5 16	5 14	5 12	5 10	5 08	5 05	5 03	5 01	4 59	4 56	4 54	4 52	4 49	4 46	4 44
22 28 N	June 5	5 17	5 15	5 13	5 11	5 09	5 07	5 05	5 02	5 00	4 58	4 55	4 53	4 50	4 48	4 45	4 43
22 57	10	5 17	5 15	5 13	5 11	5 09	5 07	5 04	5 02	5 00	4 58	4 55	4 53	4 50	4 47	4 45	4 42
23 17	15	5 18	5 16	5 13	5 12	5 09	5 07	5 05	5 02	5 00	4 58	4 55	4 53	4 50	4 47	4 45	4 42
23 26	20	5 19	5 17	5 14	5 13	5 10	5 08	5 06	5 03	5 01	4 58	4 56	4 54	4 51	4 48	4 46	4 43
23 25	25	5 20	5 18	5 15	5 14	5 11	5 09	5 07	5 05	5 02	5 00	4 57	4 55	4 52	4 49	4 46	4 43
23 14 N	30	5 21	5 19	5 17	5 15	5 13	5 11	5 08	5 06	5 04	5 01	4 59	4 56	4 54	4 51	4 49	4 46
22 52 N	July 5	5 23	5 21	5 19	5 17	5 15	5 12	5 10	5 08	5 06	5 03	5 01	4 59	4 56	4 53	4 51	4 48
22 21	10	5 25	5 23	5 21	5 19	5 17	5 15	5 12	5 10	5 08	5 06	5 03	5 01	4 59	4 56	4 54	4 51
21 40	15	5 27	5 25	5 23	5 21	5 19	5 17	5 15	5 13	5 11	5 08	5 06	5 04	5 01	4 59	4 57	4 54
20 50	20	5 29	5 27	5 25	5 23	5 21	5 19	5 17	5 15	5 13	5 11	5 09	5 07	5 05	5 02	5 00	4 58
19 50	25	5 31	5 29	5 27	5 26	5 23	5 22	5 20	5 18	5 16	5 14	5 12	5 10	5 08	5 06	5 04	5 02
18 43 N	30	5 33	5 31	5 29	5 28	5 26	5 24	5 23	5 21	5 19	5 17	5 15	5 13	5 11	5 09	5 07	5 05
17 28 N	Aug. 4	5 34	5 33	5 32	5 30	5 28	5 27	5 25	5 24	5 22	5 20	5 18	5 17	5 15	5 13	5 11	5 10
16 06	9	5 36	5 35	5 34	5 32	5 31	5 29	5 28	5 26	5 25	5 23	5 22	5 20	5 18	5 17	5 15	5 13
14 37	14	5 38	5 37	5 36	5 34	5 33	5 32	5 30	5 29	5 28	5 26	5 25	5 23	5 22	5 20	5 19	5 17
13 08	19	5 40	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 30	5 29	5 28	5 26	5 25	5 24	5 23	5 21
11 23	24	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26
9 39 N	29	5 42	5 42	5 41	5 40	5 39	5 38	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 30
7 51 N	Sept. 3	5 44	5 43	5 42	5 42	5 41	5 40	5 40	5 39	5 38	5 38	5 37	5 36	5 35	5 34	5 33	5 32
6 00	8	5 45	5 45	5 44	5 44	5 43	5 42	5 42	5 42	5 41	5 40	5 40	5 39	5 39	5 38	5 38	5 37
4 07	13	5 46	5 46	5 46	5 45	5 45	5 44	5 44	5 44	5 43	5 43	5 43	5 42	5 42	5 42	5 41	5 41
2 11	18	5 47	5 47	5 47	5 47	5 47	5 46	5 46	5 46	5 46	5 46	5 46	5 45	5 45	5 45	5 45	5 45
0 15 N	23	5 49	5 49	5 49	5 49	5 49	5 48	5 49	5 49	5 49	5 48	5 48	5 48	5 48	5 49	5 49	5 49
1 42 S	28	5 50	5 50	5 50	5 50	5 50	5 51	5 51	5 51	5 51	5 51	5 51	5 52	5 52	5 52	5 52	5 53
3 39 S	Oct. 3	5 51	5 52	5 52	5 52	5 52	5 53	5 53	5 54	5 54	5 54	5 55	5 55	5 55	5 56	5 56	5 57
5 35	8	5 53	5 53	5 54	5 54	5 55	5 55	5 56	5 56	5 57	5 57	5 58	5 58	5 59	6 00	6 00	6 01
7 28	13	5 54	5 55	5 56	5 56	5 57	5 58	5 58	5 59	6 00	6 00	6 01	6 02	6 03	6 04	6 04	6 05
9 20	18	5 56	5 57	5 58	5 59	6 00	6 00	6 01	6 02	6 03	6 04	6 05	6 06	6 07	6 08	6 08	6 10
11 08	23	5 58	5 59	6 00	6 01	6 02	6 03	6 04	6 05	6 06	6 07	6 08	6 09	6 10	6 12	6 13	6 14
12 51 S	28	6 01	6 02	6 03	6 04	6 05	6 06	6 07	6 08	6 10	6 11	6 12	6 13	6 15	6 16	6 18	6 19
14 30 S	Nov. 2	6 03	6 04	6 06	6 07	6 08	6 09	6 10	6 12	6 13	6 15	6 16	6 17	6 19	6 21	6 22	6 24
16 03	7	6 06	6 07	6 08	6 10	6 11	6 13	6 14	6 15	6 17	6 18	6 20	6 22	6 23	6 25	6 27	6 29
17 29	12	6 09	6 10	6 11	6 13	6 14	6 16	6 18	6 19	6 21	6 22	6 24	6 26	6 28	6 30	6 32	6 34
18 48	17	6 12	6 13	6 15	6 16	6 18	6 20	6 21	6 23	6 25	6 27	6 29	6 30	6 32	6 35	6 37	6 39
19 58	22	6 15	6 16	6 18	6 20	6 22	6 23	6 25	6 27	6 29	6 31	6 33	6 35	6 37	6 39	6 42	6 44
20 59 S	27	6 18	6 20	6 22	6 23	6 25	6 27	6 29	6 31	6 33	6 35	6 37	6 39	6 42	6 44	6 46	6 49
21 51 S	Dec. 2	6 21	6 23	6 25	6 27	6 29	6 31	6 33	6 35	6 37	6 39	6 41	6 43	6 46	6 48	6 51	6 53
22 32	7	6 24	6 26	6 28	6 30	6 32	6 34	6 36	6 38	6 41	6 43	6 45	6 47	6 50	6 52	6 55	6 57
23 02	12	6 28	6 29	6 31	6 33	6 36	6 38	6 40	6 42	6 44	6 46	6 49	6 51	6 54	6 56	6 59	7 01
23 20	17	6 30	6 32	6 34	6 36	6 38	6 41	6 43	6 45	6 47	6 50	6 52	6 54	6 57	6 59	7 02	7 04
23 27	22	6 33	6 35	6 37	6 39	6 40	6 43	6 45	6 48	6 50	6 52	6 55	6 57	7 00	7 02	7 05	7 07
23 22 S	27	6 35	6 37	6 39	6 41	6 43	6 46	6 48	6 50	6 52	6 54	6 57	6 59	7 02	7 04	7 07	7 09
23 05 S	Jan. 1	6 37	6 39	6 41	6 43	6 45	6 47	6 49	6 51	6 54	6 56	6 58	7 01	7 03	7 05	7 08	7 10

Declination.	Approx. date.	North Latitude.															
		21°	22°	23°	24°	25°	26°	27°	28°	29°	30°	31°	32°	33°	34°	35°	36°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 08 S	Jan. 1	5 31	5 29	5 27	5 25	5 23	5 21	5 19	5 17	5 14	5 12	5 10	5 08	5 05	5 03	5 00	4 57
22 34	6	5 34	5 32	5 30	5 28	5 26	5 24	5 22	5 20	5 18	5 16	5 14	5 12	5 09	5 07	5 04	5 01
21 53	11	5 38	5 36	5 33	5 32	5 30	5 28	5 26	5 24	5 22	5 20	5 18	5 16	5 13	5 11	5 09	5 06
21 02	16	5 41	5 39	5 37	5 36	5 34	5 32	5 30	5 28	5 26	5 24	5 22	5 20	5 18	5 16	5 13	5 11
20 01	21	5 44	5 43	5 41	5 39	5 37	5 36	5 35	5 32	5 30	5 28	5 26	5 25	5 22	5 20	5 18	5 16
18 50	26	5 48	5 46	5 44	5 43	5 41	5 40	5 38	5 36	5 34	5 33	5 31	5 29	5 27	5 25	5 23	5 21
17 31 S	30	5 51	5 49	5 48	5 46	5 45	5 43	5 42	5 40	5 39	5 37	5 36	5 34	5 32	5 30	5 28	5 26
16 04 S	Feb. 5	5 54	5 52	5 51	5 50	5 48	5 47	5 46	5 44	5 43	5 41	5 40	5 38	5 37	5 35	5 33	5 31
14 30	10	5 56	5 55	5 54	5 53	5 52	5 50	5 49	5 48	5 47	5 46	5 44	5 43	5 41	5 40	5 39	5 37
12 51	15	5 59	5 58	5 57	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 48	5 47	5 46	5 45	5 43	5 42
11 06	20	6 01	6 00	6 00	5 59	5 58	5 57	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47
9 16 S	25	6 03	6 02	6 02	6 01	6 01	6 00	5 59	5 58	5 58	5 57	5 56	5 55	5 54	5 54	5 53	5 52
7 18 S	Mar. 2	6 05	6 05	6 04	6 04	6 03	6 03	6 02	6 01	6 01	6 00	6 00	5 59	5 58	5 58	5 57	5 56
5 28	7	6 07	6 07	6 07	6 06	6 06	6 05	6 04	6 04	6 04	6 03	6 03	6 03	6 02	6 02	6 02	6 01
3 25	12	6 09	6 09	6 09	6 08	6 08	6 08	6 08	6 07	6 07	6 07	6 07	6 06	6 06	6 06	6 06	6 06
1 27 S	17	6 11	6 11	6 11	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10
0 32 N	22	6 12	6 12	6 12	6 12	6 13	6 13	6 13	6 13	6 13	6 13	6 13	6 14	6 14	6 14	6 14	6 14
2 30 N	27	6 14	6 14	6 14	6 14	6 15	6 15	6 15	6 16	6 16	6 16	6 16	6 17	6 17	6 18	6 18	6 18
4 26 N	Apr. 1	6 15	6 16	6 16	6 16	6 17	6 17	6 18	6 18	6 19	6 19	6 20	6 20	6 21	6 21	6 22	6 22
6 21	6	6 17	6 17	6 18	6 18	6 19	6 20	6 20	6 21	6 22	6 22	6 23	6 24	6 24	6 25	6 26	6 27
8 13	11	6 18	6 19	6 20	6 20	6 21	6 22	6 23	6 24	6 24	6 25	6 26	6 27	6 28	6 29	6 30	6 31
10 01	16	6 20	6 21	6 22	6 22	6 23	6 24	6 25	6 26	6 27	6 28	6 29	6 30	6 31	6 33	6 34	6 35
11 46	21	6 21	6 22	6 24	6 24	6 26	6 27	6 28	6 29	6 30	6 31	6 32	6 34	6 35	6 36	6 38	6 39
13 25 N	26	6 23	6 24	6 26	6 27	6 28	6 29	6 30	6 32	6 33	6 34	6 36	6 37	6 39	6 40	6 42	6 43
14 59 N	May 1	6 25	6 26	6 28	6 29	6 30	6 32	6 33	6 35	6 36	6 38	6 39	6 41	6 43	6 44	6 46	6 48
16 27	6	6 27	6 28	6 30	6 31	6 33	6 34	6 36	6 38	6 39	6 41	6 43	6 44	6 46	6 48	6 50	6 52
17 48	11	6 29	6 31	6 32	6 34	6 36	6 37	6 39	6 41	6 42	6 44	6 46	6 48	6 50	6 52	6 54	6 56
19 02	16	6 31	6 33	6 35	6 36	6 38	6 40	6 42	6 44	6 46	6 47	6 49	6 51	6 54	6 56	6 58	7 00
20 04	21	6 33	6 35	6 37	6 39	6 41	6 42	6 44	6 46	6 48	6 50	6 53	6 55	6 57	6 59	7 02	7 04
21 05	26	6 36	6 37	6 39	6 41	6 43	6 45	6 47	6 49	6 51	6 54	6 56	6 58	7 00	7 03	7 05	7 08
21 58 N	31	6 38	6 40	6 42	6 43	6 46	6 48	6 50	6 52	6 54	6 56	6 58	7 01	7 03	7 06	7 09	7 11
22 31 N	June 5	6 40	6 42	6 44	6 46	6 48	6 50	6 52	6 54	6 56	6 59	7 01	7 04	7 07	7 09	7 11	7 14
23 00	10	6 41	6 43	6 45	6 48	6 50	6 52	6 54	6 56	6 59	7 01	7 03	7 06	7 09	7 11	7 14	7 17
23 18	15	6 43	6 45	6 47	6 49	6 52	6 54	6 56	6 58	7 00	7 03	7 05	7 08	7 10	7 13	7 16	7 19
23 26	20	6 44	6 46	6 48	6 50	6 53	6 55	6 57	6 59	7 02	7 04	7 07	7 09	7 12	7 15	7 17	7 21
23 24	25	6 45	6 47	6 49	6 51	6 54	6 56	6 58	7 00	7 03	7 05	7 08	7 10	7 13	7 16	7 18	7 21
23 12 N	30	6 46	6 48	6 50	6 52	6 54	6 56	6 58	7 01	7 03	7 05	7 08	7 10	7 13	7 16	7 18	7 21
22 50 N	July 5	6 46	6 48	6 50	6 52	6 54	6 56	6 58	7 01	7 03	7 05	7 08	7 10	7 12	7 15	7 18	7 21
22 17	10	6 46	6 47	6 49	6 51	6 53	6 55	6 57	7 00	7 02	7 04	7 07	7 09	7 12	7 14	7 17	7 19
21 35	15	6 45	6 47	6 48	6 50	6 52	6 54	6 56	6 59	7 01	7 03	7 05	7 07	7 10	7 12	7 15	7 17
20 44	20	6 43	6 45	6 47	6 49	6 51	6 52	6 54	6 57	6 59	7 01	7 03	7 05	7 07	7 10	7 12	7 14
19 44	25	6 42	6 43	6 45	6 47	6 49	6 50	6 52	6 54	6 56	6 58	7 00	7 02	7 04	7 07	7 09	7 11
18 36 N	30	6 40	6 41	6 43	6 44	6 46	6 48	6 49	6 51	6 53	6 55	6 57	6 59	7 01	7 03	7 05	7 07
17 20 N	Aug. 4	6 37	6 38	6 40	6 41	6 43	6 45	6 46	6 48	6 49	6 51	6 53	6 54	6 56	6 58	7 00	7 02
15 57	9	6 34	6 35	6 37	6 38	6 40	6 41	6 42	6 44	6 45	6 47	6 48	6 50	6 52	6 54	6 55	6 57
14 28	14	6 31	6 32	6 33	6 34	6 36	6 37	6 38	6 40	6 41	6 42	6 44	6 45	6 47	6 48	6 50	6 51
12 53	19	6 27	6 28	6 29	6 30	6 31	6 32	6 34	6 35	6 36	6 37	6 38	6 40	6 41	6 42	6 44	6 45
11 13	24	6 23	6 24	6 25	6 26	6 27	6 28	6 29	6 30	6 31	6 32	6 33	6 34	6 35	6 36	6 38	6 39
9 29 N	29	6 19	6 19	6 20	6 21	6 22	6 23	6 24	6 24	6 25	6 26	6 27	6 28	6 29	6 30	6 31	6 32
7 40 N	Sept. 3	6 14	6 15	6 16	6 16	6 17	6 18	6 18	6 19	6 20	6 20	6 21	6 22	6 23	6 24	6 26	6 27
5 49	8	6 10	6 10	6 11	6 11	6 12	6 12	6 13	6 13	6 14	6 14	6 15	6 15	6 16	6 17	6 18	6 19
3 55	13	6 05	6 05	6 06	6 06	6 06	6 06	6 07	6 07	6 08	6 08	6 08	6 09	6 09	6 09	6 10	6 11
2 00	18	6 00	6 00	6 00	6 01	6 01	6 01	6 01	6 01	6 02	6 02	6 02	6 02	6 02	6 02	6 03	6 03
0 03 N	23	5 56	5 56	5 55	5 55	5 55	5 56	5 55	5 55	5 55	5 56	5 56	5 56	5 56	5 56	5 56	5 56
1 54 S	28	5 51	5 51	5 50	5 50	5 50	5 50	5 50	5 50	5 49	5 49	5 49	5 49	5 49	5 49	5 48	5 48
3 51 S	Oct. 3	5 46	5 46	5 46	5 45	5 45	5 45	5 44	5 44	5 44	5 43	5 43	5 43	5 42	5 42	5 41	5 41
5 46	8	5 42	5 41	5 41	5 40	5 40	5 39	5 39	5 38	5 38	5 37	5 37	5 36	5 36	5 35	5 34	5 34
7 40	13	5 38	5 37	5 38	5 36	5 35	5 34	5 34	5 33	5 32	5 32	5 31	5 30	5 29	5 29	5 28	5 27
9 31	18	5 34	5 33	5 32	5 31	5 30	5 30	5 29	5 28	5 27	5 26	5 25	5 24	5 23	5 22	5 21	5 20
11 18	23	5 30	5 29	5 28	5 27	5 26	5 25	5 24	5 23	5 22	5 21	5 20	5 19	5 18	5 17	5 16	5 14
13 02 S	28	5 27	5 26	5 25	5 24	5 22	5 21	5 20	5 19	5 18	5 17	5 15	5 14	5 13	5 11	5 10	5 09
14 40 S	Nov. 2	5 24	5 23	5 22	5 20	5 19	5 18	5 16	5 15	5 14	5 12	5 10	5 10	5 08	5 06	5 05	5 03
16 12	7	5 22	5 20	5 19	5 18	5 16	5 15	5 13	5 12	5 10	5 09	6 07	5 06	5 04	5 02	5 01	4 59
17 38	12	5 20	5 18	5 17	5 16	5 14	5 12	5 11	5 09	5 07	5 06	5 04	5 02	5 00	4 59	4 57	4 55
18 55	17	5 19	5 17	5 15	5 14	5 12	5 10	5 09	5 07	5 05	5 03	5 01	5 00	4 58	4 56	4 54	4 52
20 05	22	5 18	5 16	5 14	5 13	5 10	5 09	5 08	5 06	5 04	5 02	4 59	4 58	4 56	4 53	4 51	4 49
21 05 S	27	5 18	5 16	5 14	5 12	5 10	5 09	5 07	5 05	5 03	5 01	4 58	4 56	4 54	4 52	4 50	4 47
21 55 S	Dec. 2	5 18	5 16	5 14	5 13	5 11	5 09	5 07	5 05	5 02	5 00	4 58	4 56	4 53	4 51	4 49	4 46
22 35	7	5 19	5 17	5 15	5 14	5 11	5 09	5 08	5 05	5 03	5 00	4 58	4 56	4 53	4 51	4 49	4 46
23 04	12	5 21	5 19	5 17	5 15	5 13	5 10	5 08	5 06	5 04	5 02	4 59	4 57	4 54	4 52	4 50	4 47
23 21	17	5 23	5 21	5 19	5 17	5 14	5 12	5 10	5 08	5 06	5 03	5 01	4 59	4 56	4 54	4 51	4 48
23 27	22	5 25	5 23	5 21	5 19	5 17	5 15	5 13	5 10	5 08	5 06	5 03	5 01	4 58	4 56	4 53	4 51
23 21 S	27	5 28	5 26	5 24	5 22	5 20	5 18	5 16	5 13	5 11	5 09	5 06	5 04	5 01	4 59	4 56	4 54
23 08 S	Jan. 1	5 31	5 29	5 27	5 25	5 23	5 21	5 19	5 17	5 14	5 12	5 10	5 08	5 05	5 03	5 00	4 57

Declination.		Approx. date.	North Latitude.															
			37°	38°	39°	40°	41°	42°	43°	44°	45°	46°	47°	48°	49°	50°	51°	52°
°	′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23	05 S	Jan. 1	7 13	7 16	7 19	7 22	7 25	7 28	7 31	7 35	7 39	7 42	7 46	7 50	7 54	7 59	8 03	8 08
22	37	6	7 13	7 16	7 19	7 22	7 25	7 28	7 31	7 34	7 38	7 41	7 45	7 49	7 53	7 58	8 02	8 07
21	58	11	7 13	7 16	7 19	7 21	7 24	7 27	7 30	7 33	7 37	7 40	7 44	7 47	7 51	7 55	8 00	8 04
21	08	16	7 12	7 14	7 17	7 20	7 23	7 26	7 29	7 32	7 35	7 38	7 41	7 45	7 49	7 53	7 57	8 01
20	07	21	7 10	7 12	7 14	7 17	7 19	7 22	7 25	7 28	7 31	7 34	7 38	7 41	7 45	7 49	7 53	7 57
18	58	26	7 06	7 09	7 11	7 14	7 16	7 19	7 22	7 24	7 27	7 31	7 34	7 37	7 40	7 43	7 46	7 50
17	39 S	31	7 04	7 06	7 08	7 10	7 12	7 15	7 17	7 19	7 22	7 25	7 28	7 31	7 33	7 37	7 40	7 43
16	13 S	Feb. 5	6 59	7 01	7 03	7 05	7 07	7 09	7 11	7 13	7 16	7 19	7 21	7 24	7 26	7 29	7 32	7 35
14	40	10	6 54	6 56	6 58	7 00	7 01	7 03	7 05	7 07	7 09	7 12	7 14	7 16	7 18	7 21	7 24	7 27
13	01	15	6 48	6 50	6 52	6 54	6 56	6 58	6 59	7 01	7 02	7 04	7 06	7 08	7 10	7 12	7 14	7 16
11	16	20	6 43	6 44	6 46	6 47	6 48	6 49	6 51	6 52	6 54	6 56	6 58	6 59	7 01	7 03	7 05	7 07
9	28 S	25	6 37	6 38	6 40	6 41	6 42	6 43	6 44	6 45	6 46	6 47	6 49	6 50	6 51	6 53	6 55	6 56
7	30 S	Mar. 2	6 30	6 31	6 32	6 33	6 34	6 35	6 36	6 37	6 38	6 39	6 40	6 40	6 42	6 43	6 44	6 45
5	34	7	6 22	6 23	6 24	6 25	6 25	6 26	6 27	6 27	6 28	6 28	6 29	6 30	6 31	6 32	6 33	6 34
3	37	12	6 15	6 16	6 16	6 17	6 17	6 17	6 18	6 18	6 19	6 20	6 20	6 21	6 21	6 22	6 22	6 22
1	39 S	17	6 08	6 08	6 09	6 09	6 09	6 09	6 09	6 09	6 09	6 09	6 10	6 10	6 10	6 11	6 11	6 11
0	20 N	22	6 01	6 01	6 01	6 01	6 00	6 00	6 00	6 00	6 00	6 00	6 00	6 00	6 00	6 00	6 00	5 59
2	18 N	27	5 53	5 53	5 53	5 53	5 52	5 52	5 51	5 51	5 50	5 50	5 50	5 50	5 49	5 49	5 48	5 48
4	15 N	Apr. 1	5 45	5 45	5 45	5 45	5 45	5 44	5 43	5 43	5 42	5 41	5 40	5 40	5 39	5 38	5 37	5 36
6	09	6	5 37	5 37	5 37	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 31	5 30	5 28	5 27	5 26	5 24
8	02	11	5 30	5 29	5 29	5 29	5 27	5 26	5 25	5 24	5 23	5 21	5 20	5 19	5 18	5 16	5 15	5 13
9	51	16	5 23	5 22	5 22	5 22	5 21	5 19	5 18	5 16	5 15	5 13	5 12	5 10	5 08	5 06	5 05	5 03
11	35	21	5 17	5 16	5 15	5 14	5 12	5 10	5 09	5 07	5 04	5 03	5 01	4 59	4 57	4 55	4 53	4 50
13	15 N	26	5 10	5 09	5 08	5 07	5 05	5 03	5 01	4 59	4 57	4 55	4 53	4 51	4 49	4 46	4 44	4 41
14	50 N	May 1	5 04	5 02	5 01	5 00	4 58	4 56	4 54	4 52	4 49	4 47	4 45	4 43	4 40	4 37	4 34	4 31
16	19	6	4 59	4 57	4 55	4 54	4 52	4 50	4 47	4 45	4 42	4 40	4 37	4 34	4 32	4 29	4 25	4 22
17	42	11	4 54	4 52	4 50	4 49	4 46	4 44	4 41	4 39	4 36	4 33	4 30	4 27	4 23	4 20	4 16	4 12
18	55	16	4 50	4 48	4 46	4 44	4 41	4 38	4 35	4 32	4 30	4 27	4 23	4 20	4 16	4 13	4 10	4 06
19	58	21	4 46	4 44	4 42	4 40	4 37	4 34	4 31	4 28	4 25	4 21	4 18	4 14	4 10	4 07	4 03	3 58
21	00	26	4 43	4 41	4 38	4 36	4 32	4 29	4 26	4 23	4 20	4 17	4 13	4 09	4 05	4 01	3 56	3 51
21	48 N	31	4 41	4 38	4 36	4 33	4 30	4 26	4 23	4 19	4 16	4 12	4 08	4 04	4 00	3 55	3 51	3 47
22	28 N	June 5	4 40	4 37	4 34	4 31	4 28	4 24	4 21	4 17	4 14	4 10	4 06	4 01	3 57	3 52	3 48	3 43
22	57	10	4 39	4 36	4 33	4 30	4 26	4 23	4 20	4 16	4 12	4 08	4 04	3 59	3 55	3 50	3 46	3 40
23	17	15	4 39	4 36	4 33	4 30	4 26	4 23	4 19	4 15	4 12	4 08	4 03	3 59	3 54	3 49	3 45	3 39
23	26	20	4 40	4 36	4 33	4 30	4 27	4 23	4 20	4 16	4 12	4 08	4 04	3 59	3 54	3 49	3 45	3 39
23	25	25	4 40	4 37	4 34	4 31	4 27	4 24	4 20	4 16	4 13	4 09	4 04	3 59	3 55	3 50	3 44	3 39
23	14 N	30	4 43	4 40	4 37	4 33	4 29	4 26	4 23	4 18	4 15	4 11	4 06	4 02	3 57	3 52	3 47	3 42
22	52 N	July 5	4 45	4 42	4 39	4 36	4 33	4 30	4 26	4 22	4 19	4 15	4 10	4 06	4 02	3 57	3 52	3 46
22	21	10	4 48	4 45	4 42	4 39	4 36	4 33	4 30	4 26	4 22	4 19	4 14	4 10	4 06	4 01	3 56	3 51
21	40	15	4 51	4 48	4 45	4 42	4 39	4 36	4 33	4 29	4 26	4 22	4 18	4 14	4 10	4 05	4 01	3 56
20	50	20	4 55	4 52	4 49	4 46	4 43	4 40	4 37	4 34	4 31	4 27	4 23	4 19	4 16	4 11	4 07	4 03
19	50	25	4 59	4 56	4 53	4 50	4 48	4 45	4 42	4 39	4 36	4 33	4 29	4 25	4 22	4 18	4 13	4 09
18	43 N	30	5 03	5 00	4 57	4 55	4 52	4 50	4 47	4 44	4 41	4 38	4 35	4 32	4 29	4 25	4 21	4 16
17	28 N	Aug. 4	5 07	5 04	5 01	4 59	4 56	4 54	4 51	4 49	4 46	4 43	4 40	4 37	4 34	4 31	4 27	4 24
16	06	9	5 10	5 08	5 06	5 04	5 02	5 00	4 58	4 55	4 53	4 51	4 48	4 45	4 41	4 38	4 35	4 32
14	37	14	5 15	5 13	5 11	5 09	5 07	5 05	5 03	5 01	4 59	4 57	4 54	4 52	4 48	4 45	4 43	4 40
13	03	19	5 19	5 17	5 15	5 14	5 12	5 10	5 09	5 07	5 05	5 03	5 01	4 59	4 55	4 53	4 50	4 48
11	23	24	5 24	5 22	5 20	5 18	5 16	5 15	5 13	5 12	5 10	5 08	5 06	5 04	5 02	5 00	4 58	4 56
9	39 N	29	5 28	5 27	5 25	5 23	5 22	5 21	5 20	5 18	5 17	5 15	5 14	5 12	5 10	5 08	5 06	5 04
7	51 N	Sept. 3	5 31	5 30	5 29	5 28	5 27	5 26	5 26	5 24	5 23	5 22	5 20	5 18	5 17	5 16	5 14	5 13
6	00	8	5 36	5 35	5 34	5 33	5 32	5 31	5 31	5 30	5 29	5 28	5 27	5 25	5 24	5 23	5 22	5 21
4	07	13	5 40	5 39	5 38	5 37	5 36	5 36	5 35	5 34	5 34	5 33	5 32	5 32	5 31	5 29	5 29	5 28
2	11	18	5 45	5 44	5 43	5 42	5 42	5 42	5 41	5 41	5 41	5 40	5 40	5 40	5 39	5 39	5 38	5 37
0	15 N	23	5 49	5 48	5 47	5 47	5 47	5 47	5 47	5 47	5 47	5 47	5 47	5 47	5 47	5 47	5 46	5 45
1	42 S	28	5 53	5 53	5 52	5 52	5 52	5 52	5 53	5 53	5 53	5 53	5 53	5 54	5 54	5 58	5 58	5 54
3	39 S	Oct. 3	5 57	5 57	5 57	5 57	5 57	5 58	5 58	5 59	5 59	6 00	6 00	6 00	6 00	6 01	6 01	6 02
5	35	8	6 02	6 02	6 02	6 02	6 03	6 03	6 04	6 05	6 05	6 06	6 07	6 08	6 08	6 09	6 10	6 10
7	28	13	6 06	6 07	6 07	6 07	6 08	6 09	6 10	6 11	6 12	6 13	6 14	6 15	6 15	6 16	6 18	6 19
9	20	18	6 11	6 12	6 12	6 12	6 12	6 14	6 15	6 16	6 18	6 19	6 20	6 22	6 23	6 25	6 26	6 27
11	08	23	6 15	6 16	6 17	6 18	6 19	6 21	6 22	6 24	6 25	6 27	6 28	6 30	6 31	6 33	6 35	6 37
12	51 S	28	6 20	6 21	6 22	6 23	6 25	6 27	6 28	6 30	6 32	6 34	6 36	6 38	6 39	6 41	6 43	6 46
14	30 S	Nov. 2	6 26	6 27	6 28	6 29	6 31	6 33	6 35	6 37	6 39	6 41	6 43	6 45	6 47	6 49	6 52	6 55
16	03	7	6 31	6 32	6 32	6 34	6 36	6 38	6 40	6 42	6 45	6 47	6 50	6 52	6 55	6 51	7 00	7 08
17	29	12	6 36	6 38	6 38	6 40	6 42	6 44	6 47	6 49	6 52	6 54	6 57	7 00	7 02	7 05	7 08	7 11
18	48	17	6 41	6 43	6 44	6 46	6 49	6 51	6 54	6 57	6 59	7 02	7 05	7 08	7 11	7 14	7 18	7 21
19	58	22	6 46	6 48	6 50	6 52	6 55	6 57	7 00	7 08	7 06	7 09	7 12	7 16	7 19	7 22	7 26	7 30
20	59 S	27	6 51	6 53	6 55	6 57	7 00	7 03	7 06	7 09	7 12	7 15	7 19	7 23	7 26	7 29	7 34	7 38
21	51 S	Dec. 2	6 56	6 58	7 00	7 02	7 05	7 08	7 11	7 14	7 17	7 20	7 24	7 28	7 32	7 36	7 41	7 44
22	32	7	7 00	7 03	7 05	7 07	7 10	7 13	7 17	7 20	7 23	7 27	7 31	7 35	7 39	7 43	7 48	7 52
23	02	12	7 04	7 07	7 10	7 11	7 15	7 18	7 21	7 25	7 28	7 32	7 36	7 40	7 44	7 49	7 53	7 58
23	20	17	7 07	7 10	7 13	7 15	7 18	7 21	7 25	7 28	7 32	7 35	7 40	7 44	7 48	7 53	7 57	8 02
23	27	22	7 10	7 13	7 16	7 18	7 21	7 24	7 27	7 31	7 35	7 38	7 42	7 47	7 51	7 55	8 00	8 05
23	22 S	27	7 12	7 15	7 18	7 20	7 23	7 26	7 29	7 33	7 37	7 40	7 44	7 48	7 52	7 56	8 02	8 07
23	06 S	Jan. 1	7 13	7 16	7 19	7 22	7 25	7 28	7 31	7 35	7 39	7 42	7 46	7 50	7 54	7 59	8 03	8 08

Declination.		Approx. date.		North Latitude.													
			37°	38°	39°	40°	41°	42°	43°	44°	45°	46°	47°	48°	49°	50°	51°	52°
°	′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23	08 S	Jan. 1	4 54	4 51	4 48	4 45	4 42	4 39	4 36	4 33	4 29	4 25	4 21	4 17	4 13	4 09	4 04	3 59
22	34	6	4 58	4 55	4 53	4 50	4 47	4 45	4 42	4 38	4 34	4 31	4 27	4 23	4 19	4 15	4 10	4 05
21	53	11	5 04	5 01	4 58	4 55	4 52	4 49	4 46	4 43	4 39	4 36	4 33	4 29	4 25	4 21	4 17	4 12
21	02	16	5 09	5 06	5 03	5 00	4 57	4 55	4 52	4 49	4 46	4 43	4 39	4 36	4 32	4 28	4 24	4 20
20	01	21	5 14	5 12	5 09	5 06	5 03	5 01	4 58	4 55	4 52	4 49	4 46	4 43	4 40	4 36	4 32	4 29
18	50	26	5 18	5 16	5 14	5 11	5 06	5 06	5 04	5 01	4 58	4 56	4 53	4 50	4 47	4 43	4 40	4 36
17	31 S	31	5 24	5 21	5 19	5 17	5 15	5 12	5 11	5 09	5 06	5 04	5 01	4 59	4 56	4 52	4 48	4 45
16	04 S	Feb. 5	5 29	5 27	5 25	5 23	5 21	5 19	5 17	5 15	5 12	5 10	5 08	5 06	5 03	5 00	4 58	4 55
14	30	10	5 35	5 33	5 31	5 29	5 27	5 25	5 24	5 22	5 20	5 18	5 16	5 13	5 11	5 09	5 06	5 04
12	51	15	5 41	5 39	5 37	5 35	5 33	5 32	5 30	5 28	5 27	5 25	5 23	5 21	5 20	5 17	5 15	5 13
11	06	20	5 46	5 45	5 43	5 41	5 40	5 39	5 38	5 36	5 35	5 33	5 32	5 30	5 28	5 26	5 25	5 22
9	16 S	25	5 51	5 50	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 39	5 38	5 37	5 35	5 34	5 33
7	18 S	Mar. 2	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42
5	23	7	6 00	6 00	5 59	5 58	5 59	5 58	5 57	5 56	5 56	5 56	5 55	5 53	5 53	5 52	5 51	5 50
3	25	12	6 05	6 05	6 05	6 04	6 04	6 04	6 04	6 03	6 03	6 02	6 02	6 01	6 00	6 00	6 00	5 59
1	27 S	17	6 10	6 09	6 09	6 09	6 09	6 09	6 08	6 08	6 08	6 08	6 08	6 08	6 07	6 07	6 07	6 07
0	32 N	22	6 14	6 14	6 14	6 14	6 14	6 14	6 14	6 15	6 15	6 15	6 15	6 15	6 15	6 15	6 15	6 16
2	30 N	27	6 19	6 19	6 19	6 19	6 19	6 20	6 20	6 21	6 21	6 22	6 22	6 23	6 23	6 24	6 24	6 24
4	26 N	Apr. 1	6 23	6 24	6 24	6 24	6 25	6 26	6 27	6 27	6 28	6 28	6 29	6 30	6 31	6 32	6 33	6 33
6	21	6	6 27	6 28	6 29	6 29	6 30	6 31	6 32	6 33	6 34	6 35	6 36	6 37	6 38	6 38	6 40	6 41
8	13	11	6 32	6 33	6 34	6 34	6 35	6 36	6 37	6 39	6 40	6 41	6 43	6 44	6 46	6 46	6 48	6 50
10	01	16	6 36	6 37	6 39	6 39	6 40	6 42	6 43	6 45	6 46	6 48	6 50	6 51	6 53	6 55	6 56	6 58
11	46	21	6 41	6 42	6 43	6 44	6 46	6 47	6 49	6 51	6 53	6 55	6 57	6 59	7 01	7 03	7 05	7 07
13	25 N	26	6 45	6 46	6 47	6 49	6 51	6 53	6 55	6 57	6 59	7 01	7 03	7 06	7 08	7 10	7 12	7 15
14	59 N	May 1	6 49	6 51	6 53	6 54	6 56	6 58	7 00	7 03	7 05	7 07	7 10	7 13	7 15	7 18	7 20	7 24
16	27	6	6 54	6 56	6 57	6 59	7 01	7 04	7 06	7 09	7 11	7 14	7 17	7 20	7 23	7 25	7 28	7 32
17	48	11	6 58	7 00	7 02	7 04	7 07	7 09	7 12	7 15	7 17	7 20	7 23	7 27	7 30	7 32	7 36	7 40
19	02	16	7 02	7 04	7 06	7 09	7 11	7 14	7 17	7 20	7 23	7 26	7 30	7 33	7 37	7 40	7 44	7 48
20	04	21	7 06	7 09	7 11	7 13	7 16	7 19	7 22	7 25	7 28	7 32	7 35	7 39	7 43	7 46	7 51	7 55
21	05	26	7 10	7 13	7 15	7 18	7 21	7 24	7 26	7 31	7 34	7 37	7 41	7 45	7 49	7 53	7 57	8 02
21	53 N	31	7 14	7 17	7 20	7 22	7 26	7 29	7 32	7 36	7 39	7 43	7 47	7 51	7 55	7 59	8 04	8 09
22	31 N	June 5	7 17	7 20	7 22	7 25	7 28	7 31	7 35	7 38	7 42	7 46	7 50	7 55	7 59	8 03	8 08	8 12
23	00	10	7 20	7 23	7 25	7 28	7 31	7 34	7 37	7 41	7 45	7 49	7 54	7 58	8 03	8 07	8 12	8 17
23	18	15	7 22	7 25	7 28	7 31	7 34	7 38	7 41	7 45	7 49	7 53	7 57	8 02	8 06	8 11	8 16	8 21
23	26	20	7 23	7 26	7 29	7 32	7 36	7 39	7 43	7 47	7 51	7 54	7 59	8 04	8 08	8 13	8 18	8 23
23	24	25	7 24	7 27	7 30	7 33	7 37	7 40	7 44	7 47	7 51	7 55	8 00	8 04	8 09	8 14	8 20	8 24
23	12 N	30	7 24	7 27	7 30	7 33	7 37	7 40	7 43	7 47	7 51	7 55	7 59	8 04	8 08	8 14	8 19	8 25
22	50 N	July 5	7 24	7 27	7 30	7 33	7 37	7 40	7 43	7 47	7 51	7 55	7 59	8 03	8 08	8 13	8 18	8 23
22	17	10	7 22	7 25	7 28	7 31	7 34	7 38	7 41	7 45	7 49	7 52	7 56	8 01	8 05	8 10	8 15	8 19
21	35	15	7 20	7 23	7 26	7 29	7 32	7 35	7 39	7 42	7 45	7 49	7 53	7 57	8 01	8 05	8 10	8 15
20	44	20	7 17	7 20	7 23	7 26	7 29	7 32	7 35	7 38	7 41	7 45	7 48	7 52	7 56	8 01	8 06	8 10
19	44	25	7 13	7 16	7 19	7 22	7 25	7 27	7 30	7 33	7 36	7 39	7 43	7 47	7 50	7 54	7 58	8 02
18	36 N	30	7 09	7 12	7 15	7 17	7 20	7 22	7 25	7 28	7 31	7 33	7 37	7 40	7 43	7 48	7 52	7 56
17	20 N	Aug. 4	7 04	7 07	7 09	7 12	7 14	7 16	7 19	7 21	7 24	7 27	7 30	7 33	7 33	7 40	7 44	7 47
15	57	9	6 59	7 02	7 04	7 06	7 08	7 10	7 12	7 15	7 17	7 19	7 22	7 25	7 27	7 32	7 35	7 38
14	28	14	6 53	6 55	6 57	7 00	7 02	7 04	7 06	7 08	7 10	7 12	7 15	7 16	7 20	7 23	7 25	7 28
12	58	19	6 47	6 49	6 51	6 53	6 55	6 57	6 58	7 00	7 02	7 04	7 06	7 07	7 10	7 13	7 15	7 18
11	13	24	6 40	6 42	6 44	6 46	6 48	6 49	6 50	6 52	6 54	6 55	6 57	6 58	7 01	7 03	7 05	7 07
9	29 N	29	6 33	6 35	6 36	6 38	6 40	6 41	6 42	6 43	6 45	6 46	6 48	6 49	6 51	6 52	6 54	6 56
7	40 N	Sept. 3	6 28	6 29	6 30	6 30	6 32	6 32	6 33	6 35	6 36	6 37	6 38	6 39	6 40	6 42	6 43	6 45
5	49	8	6 20	6 21	6 22	6 22	6 23	6 24	6 25	6 26	6 26	6 27	6 28	6 29	6 30	6 31	6 32	6 33
3	55	13	6 12	6 13	6 14	6 14	6 15	6 15	6 16	6 16	6 17	6 17	6 18	6 19	6 19	6 20	6 21	6 22
2	00	18	6 03	6 04	6 05	6 06	6 06	6 06	6 07	6 07	6 07	6 08	6 08	6 08	6 09	6 09	6 09	6 10
0	08 N	23	5 56	5 57	5 57	5 58	5 58	5 58	5 58	5 58	5 58	5 58	5 58	5 58	5 58	5 58	5 58	5 58
1	54 S	28	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 48	5 48	5 48	5 48	5 48	5 47	5 47	5 47	5 46
3	51 S	Oct. 3	5 41	5 41	5 41	5 41	5 41	5 40	5 40	5 39	5 39	5 38	5 38	5 37	5 37	5 36	5 36	5 35
5	46	8	5 33	5 33	5 33	5 33	5 33	5 32	5 31	5 30	5 30	5 29	5 28	5 27	5 26	5 25	5 24	5 24
7	40	13	5 26	5 26	5 25	5 25	5 24	5 23	5 22	5 21	5 20	5 19	5 17	5 16	5 15	5 15	5 14	5 12
9	31	18	5 19	5 19	5 18	5 18	5 17	5 16	5 15	5 13	5 12	5 11	5 09	5 08	5 06	5 05	5 03	5 01
11	18	23	5 13	5 12	5 11	5 11	5 10	5 07	5 06	5 04	5 03	5 01	5 00	4 58	4 56	4 55	4 53	4 51
13	02 S	28	5 07	5 06	5 05	5 04	5 02	5 00	4 59	4 57	4 55	4 53	4 51	4 49	4 47	4 46	4 44	4 41
14	40 S	Nov. 2	5 02	5 00	4 59	4 58	4 56	4 54	4 52	4 50	4 48	4 46	4 43	4 41	4 39	4 36	4 33	4 31
16	12	7	4 57	4 55	4 54	4 53	4 51	4 48	4 46	4 44	4 41	4 39	4 37	4 34	4 31	4 29	4 26	4 23
17	38	12	4 53	4 51	4 49	4 48	4 45	4 43	4 41	4 38	4 35	4 33	4 30	4 27	4 24	4 22	4 19	4 15
18	55	17	4 49	4 48	4 46	4 44	4 42	4 38	4 36	4 33	4 30	4 27	4 24	4 21	4 18	4 16	4 12	4 08
20	05	22	4 47	4 45	4 43	4 40	4 38	4 35	4 32	4 29	4 26	4 23	4 20	4 17	4 13	4 09	4 05	4 01
21	05 S	27	4 44	4 42	4 40	4 37	4 34	4 31	4 28	4 25	4 22	4 19	4 15	4 12	4 09	4 05	4 01	3 57
21	55 S	Dec. 2	4 44	4 41	4 38	4 36	4 33	4 30	4 27	4 23	4 20	4 17	4 13	4 09	4 06	4 02	3 57	3 53
22	35	7	4 44	4 41	4 38	4 35	4 32	4 29	4 26	4 22	4 19	4 15	4 11	4 08	4 04	3 59	3 54	3 51
23	04	12	4 44	4 41	4 38	4 36	4 32	4 29	4 26	4 23	4 19	4 15	4 11	4 07	4 03	3 58	3 54	3 50
23	21	17	4 46	4 43	4 40	4 37	4 33	4 30	4 27	4 24	4 20	4 16	4 12	4 08	4 04	3 59	3 54	3 50
23	27	22	4 48	4 45	4 42	4 39	4 36	4 33	4 30	4 26	4 22	4 19	4 15	4 10	4 06	4 02	3 57	3 53
23	21 S	27	4 51	4 48	4 45	4 42	4 39	4 36	4 33	4 29	4 26	4 22	4 18	4 14	4 10	4 05	4 00	3 54
23	08 S	Jan. 1	4 54	4 51	4 48	4 45	4 42	4 39	4 36	4 33	4 29	4 25	4 21	4 17	4 13	4 09	4 04	3 59

Declination.	Approx. date.	North Latitude.															
		53°	54°	55°	56°	57°	58°	59°	60°	61°	62°	63°	64°	65°	66°	67°	68°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 05 S	Jan. 1	8 13	8 19	8 24	8 31	8 37	8 45	8 53	9 02	9 11	9 23	9 34	9 49	10 05	10 27	10 57	.....
22 37	6	8 12	8 17	8 23	8 29	8 35	8 42	8 50	8 59	9 07	9 18	9 29	9 43	9 57	10 18	10 43	11 58
21 58	11	8 09	8 14	8 19	8 25	8 31	8 38	8 45	8 54	9 02	9 11	9 22	9 34	9 47	10 06	10 26	11 24
21 08	16	8 05	8 11	8 16	8 22	8 27	8 33	8 40	8 47	8 55	9 03	9 11	9 22	9 34	9 52	10 08	10 56
20 07	21	8 01	8 07	8 11	8 16	8 21	8 27	8 33	8 39	8 47	8 56	9 05	9 16	9 27	9 40	9 55	10 32
18 58	26	7 54	7 58	8 03	8 07	8 13	8 18	8 23	8 29	8 37	8 44	8 51	9 01	9 11	9 21	9 33	9 48
17 39 S	31	7 46	7 50	7 55	7 59	8 03	8 08	8 12	8 18	8 25	8 31	8 38	8 46	8 54	9 04	9 14	9 25
16 13 S	Feb. 5	7 38	7 41	7 46	7 49	7 53	7 57	8 01	8 06	8 11	8 18	8 23	8 30	8 37	8 45	8 55	9 04
14 40	10	7 30	7 33	7 35	7 40	7 43	7 47	7 50	7 54	7 59	8 03	8 08	8 15	8 21	8 27	8 35	8 43
13 01	15	7 19	7 22	7 25	7 27	7 30	7 33	7 36	7 40	7 44	7 49	7 53	7 58	8 03	8 09	8 16	8 22
11 16	20	7 09	7 11	7 13	7 17	7 19	7 22	7 24	7 27	7 30	7 34	7 37	7 42	7 46	7 50	7 56	8 01
9 28 S	25	6 57	6 59	7 02	7 05	7 06	7 08	7 11	7 13	7 15	7 18	7 21	7 24	7 28	7 31	7 35	7 40
7 30 S	Mar. 2	6 46	6 48	6 50	6 51	6 53	6 54	6 56	6 57	6 59	7 01	7 04	7 07	7 09	7 12	7 14	7 19
5 34	7	6 35	6 36	6 37	6 38	6 39	6 40	6 41	6 43	6 43	6 45	6 47	6 48	6 50	6 52	6 55	6 57
3 37	12	6 23	6 23	6 24	6 25	6 26	6 26	6 27	6 28	6 28	6 30	6 31	6 32	6 33	6 34	6 36	6 37
1 39 S	17	6 11	6 12	6 12	6 12	6 12	6 12	6 12	6 13	6 13	6 14	6 15	6 15	6 14	6 14	6 15	6 16
0 20 N	22	5 59	5 59	5 59	5 59	5 59	5 58	5 58	5 57	5 57	5 57	5 56	5 55	5 55	5 54	5 54	5 55
2 18 N	27	5 47	5 47	5 46	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 36	5 35	5 34	5 33
4 15 N	Apr. 1	5 35	5 35	5 34	5 33	5 31	5 30	5 29	5 27	5 25	5 24	5 23	5 21	5 19	5 17	5 15	5 13
6 09	6	5 23	5 22	5 20	5 19	5 18	5 16	5 14	5 12	5 10	5 07	5 05	5 02	4 59	4 57	4 54	4 51
8 02	11	5 11	5 10	5 09	5 07	5 05	5 02	5 00	4 57	4 54	4 51	4 48	4 45	4 42	4 38	4 34	4 30
9 51	16	5 01	4 59	4 56	4 54	4 51	4-48	4 45	4 42	4 39	4 35	4 32	4 28	4 23	4 18	4 14	4 08
11 35	21	4 49	4 46	4 43	4 40	4 37	4 34	4 30	4 27	4 24	4 19	4 15	4 10	4 05	3 59	3 52	3 44
13 15 N	26	4 39	4 36	4 33	4 29	4 26	4 22	4 18	4 13	4 09	4 03	3 58	3 53	3 47	3 39	3 31	3 22
14 50 N	May 1	4 28	4 25	4 22	4 18	4 14	4 09	4 05	3 59	3 54	3 48	3 43	3 35	3 28	3 20	3 10	3 00
16 19	6	4 18	4 15	4 11	4 07	4 02	3 57	3 52	3 46	3 40	3 33	3 27	3 18	3 10	2 59	2 48	2 36
17 42	11	4 09	4 06	4 00	3 55	3 51	3 45	3 39	3 32	3 27	3 19	3 12	3 02	2 52	2 40	2 26	2 11
18 55	16	4 01	3 56	3 51	3 47	3 42	3 35	3 29	3 21	3 14	3 06	2 57	2 45	2 34	2 20	2 08	1 43
19 58	21	3 53	3 49	3 44	3 38	3 32	3 25	3 19	3 10	3 02	2 53	2 42	2 29	2 16	1 59	1 38	1 12
21 00	26	3 46	3 42	3 36	3 30	3 23	3 16	3 09	2 59	2 50	2 39	2 29	2 13	1 58	1 37	1 10	0 15
21 48 N	31	3 41	3 35	3 29	3 22	3 16	3 08	3 01	2 50	2 40	2 28	2 16	1 58	1 41	1 16	0 34	.....
22 28 N	June 5	3 37	3 31	3 25	3 18	3 11	3 02	2 54	2 43	2 32	2 19	2 06	1 45	1 25	0 52	.....	.....
22 57	10	3 34	3 28	3 21	3 14	3 07	2 58	2 49	2 38	2 27	2 12	1 58	1 35	1 12	0 23	.....	.....
23 17	15	3 33	3 27	3 20	3 13	3 05	2 56	2 47	2 35	2 23	2 08	1 53	1 27	1 02	Does not set between—		
23 26	20	3 33	3 27	3 20	3 12	3 04	2 55	2 46	2 34	2 23	2 07	1 51	1 24	0 57	June 11	June 2	May 26
23 25	25	3 33	3 28	3 20	3 12	3 04	2 55	2 46	2 35	2 23	2 07	1 51	1 25	0 58	and	and	and
23 14 N	30	3 35	3 29	3 23	3 15	3 07	2 58	2 49	2 38	2 27	2 12	1 57	1 32	1 08	July 1	July 11	July 18
22 52 N	July 5	3 40	3 34	3 28	3 21	3 13	3 04	2 56	2 44	2 33	2 19	2 05	1 43	1 21	0 35	40 days	54 days
22 21	10	3 46	3 40	3 34	3 27	3 19	3 11	3 03	2 52	2 41	2 28	2 14	1 55	1 37	1 04	.....	.....
21 40	15	3 50	3 44	3 38	3 32	3 25	3 17	3 09	3 00	2 51	2 39	2 26	2 10	1 54	1 28	0 50	.....
20 50	20	3 56	3 51	3 46	3 39	3 33	3 26	3 19	3 10	3 02	2 52	2 41	2 27	2 12	1 50	1 25	0 41
19 50	25	4 04	3 59	3 54	3 48	3 42	3 36	3 29	3 21	3 13	3 05	2 55	2 43	2 29	2 11	1 52	1 24
18 43 N	30	4 12	4 07	4 03	3 57	3 52	3 46	3 40	3 33	3 26	3 17	3 07	2 57	2 45	2 31	2 15	1 55
17 28 N	Aug. 4	4 20	4 15	4 11	4 06	4 01	3 55	3 50	3 44	3 37	3 29	3 21	3 11	3 02	2 50	2 37	2 22
16 06	9	4 28	4 24	4 20	4 15	4 11	4 06	4 01	3 56	3 50	3 44	3 37	3 29	3 21	3 12	3 00	2 48
14 37	14	4 37	4 33	4 29	4 25	4 21	4 17	4 13	4 08	4 03	3 57	3 51	3 45	3 38	3 29	3 23	3 10
13 03	19	4 45	4 42	4 38	4 35	4 32	4 28	4 24	4 20	4 16	4 11	4 05	3 59	3 53	3 47	3 38	3 30
11 23	24	4 54	4 51	4 49	4 46	4 43	4 40	4 37	4 33	4 30	4 24	4 20	4 15	4 10	4 04	3 58	3 51
9 39 N	29	5 02	5 00	4 57	4 55	4 52	4 50	4 47	4 44	4 41	4 38	4 34	4 30	4 25	4 21	4 16	4 10
7 51 N	Sept. 3	5 11	5 09	5 07	5 05	5 03	5 00	4 58	4 56	4 53	4 51	4 48	4 44	4 41	4 37	4 33	4 29
6 00	8	5 20	5 18	5 16	5 14	5 13	5 11	5 10	5 08	5 06	5.04	5 02	4 58	4 56	4 53	4 51	4 47
4 07	13	5 27	5 26	5 25	5 24	5 23	5 22	5 21	5 20	5 18	5 17	5 15	5 14	5 12	5 10	5 07	5 05
2 11	18	5 36	5 36	5 36	5 35	5 34	5 34	5 33	5 32	5 32	5 31	5 30	5 28	5 27	5 26	5 24	5 23
0 15 N	23	5 45	5 45	5 44	5 44	5 41	5 44	5 43	5 43	5 43	5 43	5 43	5 42	5 42	5 41	5 41	5 40
1 42 S	28	5 54	5 53	5 53	5 54	5 54	5 54	5 55	5 55	5 55	5 56	5 56	5 56	5 56	5 57	5 57	5 58
3 39 S	Oct. 3	6 03	6 03	6 03	6 04	6 05	6 05	6 06	6 07	6 08	6 09	6 10	6 10	6 12	6 13	6 14	6 16
5 35	8	6 12	6 12	6 13	6 14	6 15	6 16	6 18	6 19	6 21	6 22	6 24	6 25	6 27	6 29	6 31	6 34
7 28	13	6 20	6 22	6 22	6 24	6 26	6 28	6 29	6 31	6 33	6 36	6 38	6 41	6 42	6 46	6 49	6 52
9 20	18	6 29	6 31	6 32	6 34	6 37	6 39	6 41	6 44	6 47	6 49	6 52	6 55	6 58	7 02	7 06	7 11
11 08	23	6 39	6 41	6 42	6 45	6 48	6 50	6 53	6 56	7 00	7 03	7 07	7 10	7 14	7 19	7 25	7 30
12 51 S	28	6 48	6 51	6 52	6 56	6 59	7 02	7 05	7 09	7 13	7 17	7 22	7 26	7 30	7 37	7 43	7 50
14 30 S	Nov. 2	6 58	7 01	7 03	7 06	7 10	7 14	7 18	7 22	7 27	7 32	7 38	7 42	7 48	7 55	8 02	8 10
16 03	7	7 06	7 09	7 12	7 16	7 20	7 24	7 29	7 34	7 39	7 45	7 50	7 57	8 03	8 12	8 20	8 30
17 29	12	7 15	7 19	7 22	7 26	7 31	7 36	7 41	7 47	7 52	7 59	8 06	8 13	8 21	8 31	8 41	8 53
18 48	17	7 25	7 30	7 33	7 38	7 43	7 48	7 54	8 00	8 07	8 13	8 20	8 29	8 38	8 48	9 00	9 13
19 58	22	7 34	7 39	7 42	7 48	7 53	7 59	8 05	8 12	8 19	8 28	8 36	8 46	8 55	9 09	9 24	9 40
20 59 S	27	7 43	7 48	7 51	7 57	8 03	8 10	8 16	8 24	8 31	8 41	8 50	9 02	9 13	9 27	9 44	10 06
21 51 S	Dec. 2	7 49	7 54	7 59	8 06	8 12	8 19	8 26	8 34	8 43	8 53	9 02	9 16	9 28	9 45	10 06	10 33
22 32	7	7 57	8 02	8 08	8 14	8 20	8 28	8 35	8 44	8 53	9 03	9 13	9 28	9 42	10 02	10 26	11 35
23 02	12	8 02	8 08	8 14	8 20	8 27	8 35	8 42	8 52	9 01	9 12	9 22	9 38	9 53	10 15	10 44	Does
23 20	17	8 07	8 13	8 18	8 25	8 32	8 40	8 48	8 57	9 07	9 18	9 29	9 45	10 01	10 24	11 00	not
23 27	22	8 10	8 16	8 21	8 28	8 35	8 43	8 51	9 01	9 10	9 21	9 32	9 49	10 05	10 29	11 04	rise
23 22 S	27	8 12	8 18	8 24	8 30	8 37	8 45	8 53	9 03	9 12	9 22	9 33	9 49	10 05	10 27	11 02	Dec. 11
																	to
23 05 S	Jan. 1	8 13	8 19	8 24	8 31	8 37	8 45	8 53	9 02	9 11	9 23	9 34	9 49	10 05	10 27	10 57	Jan. 2

Declination.	Approx. date.	North Latitude.															
		53°	54°	55°	56°	57°	58°	59°	60°	61°	62°	63°	64°	65°	66°	67°	68°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 03 S	Jan. 1	3 54	3 49	3 43	3 36	3 30	3 22	3 14	3 05	2 56	2 44	2 32	2 17	2 02	1 40	1 11	.....
22 34	6	4 00	3 54	3 48	3 42	3 36	3 29	3 21	3 13	3 04	2 52	2 41	2 27	2 13	1 54	1 30	0 50
21 53	11	4 07	4 01	3 56	3 50	3 44	3 37	3 30	3 22	3 14	3 04	2 54	2 41	2 27	2 11	1 57	1 23
21 02	16	4 15	4 10	4 05	3 59	3 54	3 47	3 41	3 33	3 26	3 17	3 08	2 56	2 45	2 30	2 13	1 50
20 01	21	4 24	4 19	4 14	4 09	4 04	3 58	3 52	3 45	3 38	3 29	3 22	3 10	3 00	2 47	2 32	2 16
18 50	26	4 32	4 27	4 23	4 18	4 14	4 08	4 03	3 57	3 51	3 44	3 35	3 26	3 18	3 07	2 55	2 41
17 31 S	31	4 42	4 37	4 34	4 29	4 25	4 20	4 15	4 10	4 05	3 58	3 52	3 43	3 35	3 26	3 16	3 04
16 04 S	Feb. 5	4 52	4 47	4 44	4 40	4 36	4 32	4 28	4 23	4 18	4 13	4 07	4 00	3 53	3 45	3 36	3 27
14 30	10	5 01	4 57	4 55	4 51	4 48	4 44	4 41	4 36	4 32	4 27	4 23	4 17	4 10	4 04	3 57	3 49
12 51	15	5 11	5 08	5 06	5 03	5 00	4 57	4 54	4 50	4 46	4 42	4 38	4 33	4 27	4 22	4 16	4 09
11 06	20	5 20	5 17	5 15	5 13	5 11	5 08	5 05	5 03	5 00	4 56	4 53	4 48	4 44	4 40	4 35	4 30
9 16 S	25	5 31	5 29	5 27	5 25	5 23	5 21	5 19	5 16	5 14	5 12	5 08	5 05	5 02	4 58	4 54	4 50
7 18 S	Mar. 2	5 40	5 38	5 37	5 36	5 34	5 32	5 31	5 29	5 28	5 26	5 24	5 20	5 18	5 16	5 12	5 09
5 23	7	5 49	5 48	5 47	5 46	5 44	5 43	5 42	5 41	5 41	5 39	5 37	5 35	5 34	5 32	5 29	5 27
3 25	12	5 58	5 57	5 57	5 56	5 56	5 55	5 55	5 54	5 53	5 52	5 52	5 50	5 50	5 49	5 47	5 46
1 27 S	17	6 07	6 06	6 06	6 06	6 06	6 06	6 06	6 06	6 05	6 05	6 05	6 05	6 05	6 05	6 04	6 04
0 32 N	22	6 16	6 15	6 16	6 16	6 16	6 17	6 17	6 18	6 18	6 19	6 19	6 20	6 21	6 21	6 21	6 21
2 30 N	27	6 25	6 26	6 26	6 27	6 28	6 29	6 30	6 31	6 32	6 33	6 34	6 35	6 36	6 38	6 38	6 40
4 26 N	Apr. 1	6 34	6 35	6 36	6 37	6 39	6 40	6 42	6 43	6 45	6 46	6 48	6 50	6 52	6 54	6 57	6 59
6 21	6	6 43	6 43	6 45	6 47	6 48	6 50	6 52	6 55	6 57	6 59	7 02	7 04	7 06	7 10	7 13	7 17
8 13	11	6 52	6 53	6 55	6 57	6 59	7 01	7 04	7 07	7 09	7 13	7 16	7 20	7 23	7 28	7 31	7 36
10 01	16	7 00	7 02	7 04	7 07	7 10	7 13	7 16	7 19	7 22	7 26	7 30	7 35	7 39	7 43	7 49	7 55
11 46	21	7 09	7 12	7 15	7 18	7 21	7 25	7 28	7 32	7 36	7 40	7 45	7 50	7 55	8 00	8 07	8 14
13 25 N	26	7 18	7 20	7 24	7 27	7 31	7 35	7 39	7 44	7 49	7 54	7 59	8 05	8 11	8 19	8 26	8 35
14 59 N	May 1	7 27	7 30	7 33	7 37	7 41	7 46	7 51	7 56	8 02	8 07	8 13	8 20	8 27	8 36	8 45	8 56
16 27	6	7 36	7 39	7 43	7 47	7 52	7 57	8 03	8 09	8 15	8 22	8 28	8 37	8 46	8 56	9 07	9 20
17 48	11	7 44	7 48	7 52	7 57	8 02	8 08	8 14	8 21	8 28	8 35	8 43	8 53	9 04	9 15	9 29	9 45
19 02	16	7 52	7 56	8 01	8 07	8 12	8 19	8 25	8 33	8 41	8 50	8 59	9 10	9 22	9 36	9 53	10 15
20 04	21	8 00	8 04	8 09	8 16	8 22	8 29	8 36	8 44	8 53	9 03	9 13	9 26	9 40	9 56	10 16	10 44
21 05	26	8 07	8 12	8 17	8 25	8 31	8 38	8 46	8 55	9 04	9 16	9 27	9 42	9 58	10 18	10 46	.....
21 53 N	31	8 15	8 20	8 25	8 33	8 40	8 47	8 55	9 05	9 16	9 27	9 40	9 57	10 16	10 42	11 27	.....
22 31 N	June 5	8 19	8 25	8 31	8 39	8 46	8 54	9 03	9 14	9 24	9 37	9 51	10 11	10 32	11 56	.....	.....
23 00	10	8 24	8 30	8 36	8 44	8 51	9 00	9 10	9 21	9 32	9 46	10 01	10 23	10 47	11 41	.....	.....
23 18	15	8 28	8 34	8 40	8 47	8 55	9 04	9 14	9 26	9 36	9 51	10 07	10 31	10 57	Does not	set between—	
23 26	20	8 30	8 35	8 42	8 49	8 57	9 06	9 16	9 28	9 39	9 54	10 10	10 35	11 03	June 11	June 2	May 26
23 24	25	8 30	8 37	8 43	8 51	8 58	9 08	9 17	9 29	9 40	9 54	10 09	10 34	11 02	and	and	and
23 12 N	30	8 31	8 38	8 44	8 51	8 59	9 08	9 17	9 28	9 39	9 54	10 09	10 33	10 57	July 1.	July 11; 40	July 18; 54
22 50 N	July 5	8 29	8 35	8 41	8 48	8 56	9 04	9 13	9 24	9 24	9 48	10 02	10 24	10 43	11 31	days.	days.
22 17	10	8 26	8 32	8 38	8 45	8 52	9 00	9 08	9 18	9 28	9 40	9 54	10 12	10 31	11 03	.....	.....
21 35	15	8 21	8 27	8 33	8 39	8 46	8 53	9 01	9 10	9 20	9 31	9 43	9 59	10 15	10 37	11 16	.....
20 44	20	8 15	8 21	8 27	8 33	8 39	8 46	8 53	9 01	9 10	9 20	9 31	9 46	10 01	10 18	10 44	11 24
19 44	25	8 08	8 13	8 18	8 22	8 29	8 35	8 42	8 50	8 58	9 08	9 17	9 30	9 43	9 57	10 15	10 38
18 36 N	30	8 00	8 05	8 10	8 15	8 20	8 26	8 32	8 39	8 46	8 54	9 04	9 14	9 24	9 38	9 58	10 12
17 20 N	Aug. 4	7 51	7 56	8 00	8 05	8 09	8 15	8 20	8 26	8 33	8 41	8 48	8 57	9 07	9 18	9 31	9 46
15 57	9	7 42	7 46	7 50	7 54	7 58	8 03	8 07	8 13	8 19	8 25	8 32	8 40	8 49	8 58	9 09	9 22
14 28	14	7 32	7 36	7 39	7 42	7 46	7 50	7 54	7 59	8 04	8 10	8 16	8 23	8 31	8 38	8 48	8 58
12 53	19	7 22	7 24	7 27	7 30	7 33	7 37	7 41	7 45	7 49	7 54	7 59	8 05	8 11	8 18	8 26	8 33
11 13	24	7 10	7 13	7 15	7 19	7 21	7 25	7 28	7 31	7 35	7 39	7 43	7 48	7 53	7 58	8 04	8 11
9 29 N	29	6 59	7 01	7 03	7 05	7 07	7 10	7 13	7 16	7 19	7 22	7 25	7 30	7 34	7 38	7 43	7 49
7 40 N	Sept. 3	6 47	6 49	6 51	6 52	6 54	6 56	6 58	7 01	7 03	7 06	7 08	7 12	7 16	7 19	7 23	7 28
5 49	8	6 35	6 37	6 38	6 39	6 41	6 42	6 44	6 46	6 47	6 49	6 51	6 55	6 57	7 00	7 03	7 07
3 55	13	6 23	6 24	6 25	6 26	6 27	6 29	6 30	6 31	6 32	6 34	6 35	6 37	6 38	6 41	6 43	6 55
2 00	18	6 11	6 12	6 12	6 13	6 14	6 15	6 15	6 16	6 17	6 17	6 18	6 19	6 20	6 21	6 23	6 24
0 08 N	23	5 59	5 59	5 59	5 59	6 00	6 00	6 00	6 00	6 00	6 00	6 00	6 01	6 02	6 02	6 02	6 03
1 54 S	28	5 47	5 47	5 46	5 46	5 46	5 45	5 45	5 45	5 44	5 44	5 43	5 43	5 43	5 42	5 42	5 41
3 51 S	Oct. 3	5 35	5 35	5 34	5 33	5 32	5 31	5 31	5 30	5 29	5 28	5 26	5 25	5 25	5 23	5 22	5 20
5 46	8	5 23	5 22	5 21	5 20	5 19	5 17	5 16	5 15	5 13	5 11	5 10	5 08	5 06	5 04	5 02	4 59
7 40	13	5 11	5 10	5 09	5 07	5 06	5 04	5 02	5 00	4 58	4 55	4 53	4 50	4 48	4 46	4 42	4 39
9 31	18	5 01	4 59	4 57	4 55	4 53	4 50	4 48	4 46	4 43	4 40	4 37	4 33	4 31	4 27	4 22	4 18
11 18	23	4 49	4 48	4 45	4 44	4 41	4 38	4 36	4 32	4 28	4 24	4 21	4 16	4 13	4 08	4 03	3 57
13 02 S	28	4 38	4 37	4 34	4 31	4 28	4 25	4 22	4 18	4 14	4 09	4 05	4 00	3 55	3 50	3 43	3 36
14 40 S	Nov. 2	4 29	4 26	4 23	4 19	4 16	4 11	4 08	4 04	3 59	3 55	3 49	3 44	3 37	3 31	3 25	3 16
16 12	7	4 20	4 17	4 14	4 10	4 05	4 02	3 57	3 52	3 47	3 41	3 35	3 28	3 22	3 13	3 05	2 55
17 38	12	4 12	4 09	4 05	4 01	3 56	3 51	3 46	3 40	3 35	3 28	3 22	3 14	3 05	2 56	2 46	2 34
18 55	17	4 04	4 01	3 57	3 52	3 47	3 41	3 36	3 29	3 23	3 16	3 08	2 59	2 51	2 39	2 27	2 12
20 05	22	3 58	3 53	3 49	3 43	3 38	3 32	3 26	3 19	3 13	3 04	2 56	2 46	2 36	2 23	2 09	1 50
21 05 S	27	3 52	3 48	3 43	3 37	3 32	3 25	3 18	3 10	3 04	2 55	2 46	2 34	2 23	2 08	1 49	1 27
21 55 S	Dec. 2	3 48	3 44	3 38	3 32	3 27	3 19	3 12	3 04	2 57	2 47	2 37	2 24	2 11	1 52	1 31	1 08
22 35	7	3 45	3 40	3 35	3 28	3 22	3 14	3 07	2 58	2 49	2 38	2 27	2 12	1 57	1 40	1 12	0 35
23 04	12	3 44	3 39	3 33	3 27	3 20	3 12	3 05	2 55	2 46	2 34	2 23	2 07	1 51	1 29	0 58	Does
23 21	17	3 44	3 38	3 32	3 26	3 19	3 11	3 03	2 54	2 44	2 32	2 20	2 04	1 47	1 24	0 49	not
23 27	22	3 47	3 41	3 36	3 29	3 22	3 14	3 06	2 56	2 47	2 35	2 23	2 06	1 49	1 25	0 49	rise
23 21 S	27	3 49	3 43	3 37	3 31	3 24	3 16	3 08	2 59	2 49	2 37	2 25	2 09	1 52	1 30	0 56	Dec. 11
23 08 S	Jan. 1	3 54	3 49	3 43	3 36	3 30	3 22	3 14	3 05	2 56	2 44	2 32	2 17	2 02	1 40	1 11	to Jan. 2.

Declination.	Approx. date.	North Latitude.															
		69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	80°	82°	84°	86°	88°	90°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 05S	Jan. 1	Rises	Sun does not rise—			Sun does not rise between—				Sun does not rise between—				Sun does not rise between—			
22 37	6	Jan. 11	Nov.27	Nov.22	Nov.18	Nov.14	Nov.10	Nov. 6	Nov. 4	Nov. 1	Oct. 28	Oct. 23	Oct. 17	Oct. 12	Oct. 7	Oct. 1	Sept.27
21 58	11	11 52	to	to	to	and	and	and	and	and	and	and	and	and	and	and	and
21 08	16	11 05	Jan. 16	Jan. 21	Jan. 25	Jan.29;	Feb. 2;	Feb. 6;	Feb. 9;	Feb.11;	Feb.14;	Feb.20;	Feb.26;	Mar. 3;	Mar. 8;	Mar.13;	Mar.18;
20 07	21	10 35	11 03	.....	.....	77	85	93	98	103	110	121	133	143	153	164	173
18 58	26	10 05	10 26	10 56	11 38	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
17 39S	31	9 39	9 56	10 16	10 44	11 18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 13S	Feb. 5	9 15	9 28	9 43	10 03	10 23	11 03	11 53	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 40	10	8 53	9 03	9 14	9 28	9 44	10 06	10 31	11 28	.....	.....	.....	.....	.....	.....	.....	.....
13 01	15	8 29	8 38	8 48	8 58	9 11	9 25	9 43	10 11	10 36	.....	.....	.....	.....	.....	.....	.....
11 16	20	8 07	8 14	8 22	8 30	8 39	8 51	9 03	9 18	9 38	10 10	.....	.....	.....	.....	.....	.....
9 28S	25	7 45	7 50	7 56	8 02	8 09	8 18	8 28	8 40	8 54	9 12	10 06	.....	.....	.....	.....	.....
7 30S	Mar. 2	7 22	7 26	7 31	7 35	7 40	7 47	7 55	8 08	8 13	8 25	8 55	9 52	.....	.....	.....	.....
5 34	7	6 59	7 02	7 06	7 09	7 13	7 17	7 22	7 28	7 34	7 41	8 00	8 32	9 33	.....	.....	.....
3 37	12	6 38	6 39	6 41	6 43	6 45	6 48	6 51	6 54	6 57	7 02	7 11	7 28	7 56	9 22	.....	.....
1 39S	17	6 16	6 16	6 16	6 18	6 18	6 19	6 19	6 21	6 21	6 22	6 25	6 29	6 36	6 50	7 32	.....
0 20N	22	5 54	5 53	5 52	5 52	5 50	5 49	5 48	5 47	5 45	5 43	5 38	5 31	5 18	4 53	3 30	.....
2 18N	27	5 31	5 29	5 26	5 25	5 22	5 20	5 17	5 14	5 09	5 06	4 51	4 31	3 55	2 30	.....	.....
4 15N	Apr. 1	5 09	5 06	5 03	5 00	4 55	5 01	4 45	4 40	4 32	4 24	4 00	3 23	2 05	.....	.....	.....
6 09	6	4 47	4 42	4 37	4 32	4 26	4 19	4 12	3 58	3 53	3 40	3 03	1 54	.....	.....	.....	.....
8 02	11	4 24	4 18	4 12	4 05	3 58	3 49	3 39	3 26	3 10	2 51	1 47	.....	.....	.....	.....	.....
9 51	16	4 01	3 53	3 45	3 35	3 25	3 12	2 58	2 40	2 18	1 45	.....	.....	.....	.....	.....	.....
11 35	21	3 37	3 28	3 17	3 05	2 52	2 34	2 13	1 47	1 04	.....	.....	.....	.....	.....	.....	.....
13 15N	26	3 13	3 01	2 48	2 33	2 13	1 48	1 06	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 50N	May 1	2 47	2 33	2 15	1 55	1 25	0 37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 19	6	2 20	2 02	1 37	1 05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 42	11	1 50	1 24	0 48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 55	16	1 13	0 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 58	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 00	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 48N	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22 28N	June 5	Sun does not set between—				Sun does not set between—				Sun does not set between—				Sun does not set between—			
22 57	10	May 21	May 16	May 12	May 9	May 5	May 2	Apr. 28	Apr. 25	Apr. 22	Apr. 19	Apr. 14	Apr. 8	Apr. 3	Mar.29	Mar.24	Mar.19
23 17	15	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and
23 26	20	July23;	July27;	July31;	Aug. 4;	Aug. 8;	Aug.12;	Aug.15;	Aug.18;	Aug.22;	Aug.24;	Aug.29;	Sept. 4;	Sept. 9;	Sept.15;	Sept.20;	Sept.26;
23 25	25	64	78	81	88	96	103	110	116	123	128	138	150	160	171	181	192
23 14N	30	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
22 52N	July 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22 21	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 40	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 50	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 50	25	0 44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 43N	30	1 29	0 51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 28N	Aug. 4	2 04	1 41	1 09	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 06	9	2 35	2 16	1 57	1 23	0 40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 37	14	2 58	2 45	2 20	2 10	1 44	1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13 08	19	3 20	3 10	2 56	2 44	2 26	2 05	1 35	0 44	.....	.....	.....	.....	.....	.....	.....	.....
11 23	24	3 43	3 34	3 25	3 13	3 00	2 44	2 26	2 01	1 27	.....	.....	.....	.....	.....	.....	.....
9 39N	29	4 03	3 57	3 49	3 40	3 30	3 18	3 05	2·45	2 37	1 55	.....	.....	.....	.....	.....	.....
7 51N	Sept. 3	4 23	4 18	4 12	4 06	3 57	3 48	3 37	3 24	3 08	2 49	1 54	.....	.....	.....	.....	.....
6 00	8	4 43	4 39	4 33	4 29	4 22	4 16	4 08	4 00	3 48	3 36	3 03	1 58	.....	.....	.....	.....
4 07	13	5 02	4 59	4 56	4 53	4 48	4 44	4 38	4 33	4 25	4 17	3 56	3 20	2 08	.....	.....	.....
2 11	18	5 20	5 19	5 17	5 15	5 12	5 10	5 06	5 03	4 57	4 54	4 42	4 23	3 50	2 30	.....	.....
0 15N	23	5 39	5 39	5 38	5 38	5 36	5 26	5 34	5 33	5 31	5 29	5 25	5 18	5 07	4 44	3 29	.....
1 42S	28	5 59	5 59	5 59	6 00	6 00	6 01	6 01	6 03	6 03	6 04	6 08	6 12	6 20	6 35	7 21	.....
3 39S	Oct. 3	6 17	6 18	6 21	6 22	6 23	6 26	6 26	6 31	6 34	6 38	6 51	7 08	7 36	8 40	.....	.....
5 35	8	6 35	6 39	6 42	6 45	6 48	6 52	6 52	7 02	7 08	7 15	7 37	8 09	9 10	.....	.....	.....
7 28	13	6 55	6 59	7 04	7 08	7 13	7 19	7 19	7 34	7 43	7 55	8 28	9 24	.....	.....	.....	.....
9 20	18	7 15	7 20	7 26	7 32	7 39	7 47	7 47	8 07	8 20	8 41	9 32	.....	.....	.....	.....	.....
11 08	23	7 36	7 42	7 50	7 58	8 07	8 18	8 18	8 49	9 08	9 36	.....	.....	.....	.....	.....	.....
12 51S	28	7 57	8 05	8 14	8 25	8 38	8 52	8 52	9 35	10 15	.....	.....	.....	.....	.....	.....	.....
14 30S	Nov. 2	8 19	8 29	8 40	8 54	9 11	9 33	10 04	10 45	.....	.....	.....	.....	.....	.....	.....	.....
16 03	7	8 42	8 55	9 10	9 28	9 54	10 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 29	12	9 06	9 23	9 42	10 09	11 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 48	17	9 31	9 54	10 22	11 16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 58	22	9 58	10 31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 59S	27	10 34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 51S	Dec. 2	Sun does not rise between—				Sun does not rise between—				Sun does not rise between—				Sun does not rise between—			
22 32	7	Dec. 8	Nov.27	Nov.22	Nov.18	Nov.14	Nov.10	Nov. 6	Nov. 4	Nov. 1	Oct. 28	Oct. 23	Oct. 17	Oct. 12	Oct. 7	Oct. 1	Sept.27
23 02	12	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and
23 20	17	Jan.10;	Jan.16;	Jan.21;	Jan.25;	Jan.29;	Feb. 2;	Feb. 6;	Feb. 9;	Feb.11;	Feb.14;	Feb.20;	Feb.26;	Mar. 3;	Mar. 8;	Mar.13;	Mar.18;
23 27	22	39	51	61	69	77	85	93	98	103	110	121	133	143	153	164	173
23 22S	27	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
23 05S	Jan. 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Declination.	Approx. date.	*North Latitude.* 69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	80°	82°	84°	86°	88°	90°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m	h. m.	h. m.	h. m.	h. m.	h. m.
23 03S	Jan. 1	Rises	Sun does not rise—			Sun does not rise between—				Sun does not rise between—				Sun does not rise between—			
22 34	6	Jan. 11	Nov.27	Nov.22	Nov.18	Nov.14	Nov.10	Nov. 6	Nov. 4	Nov. 1	Oct. 28	Oct. 23	Oct. 17	Oct. 12	Oct. 7	Oct. 1	Sept.27
21 58	11	0 34	to	to	to	and	and	and	and	and	and	and	and	and	and	and	and
21 02	16	1 24	Jan. 16	Jan. 21	Jan. 25	Jan.29;	Feb. 2;	Feb. 6;	Feb. 9;	Feb.11;	Feb.14;	Feb.20;	Feb.26;	Mar. 3;	Mar. 8;	Mar.13;	Mar.18;
20 01	21	1 52	1 25	.....	.....	77	85	93	98	103	110	121	133	143	153	164	173
18 50	26	2 24	2 08	1 34	0 38	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
17 31S	31	2 50	2 34	2 14	1 48	1 03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 04S	Feb. 5	3 16	3 03	2 47	2 29	2 06	1 32	0 38	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 30	10	3 40	3 29	3 16	3 02	2 45	2 26	2 00	1 13	.....	.....	.....	.....	.....	.....	.....	.....
12 51	15	4 02	3 53	3 44	3 33	3 19	3 08	2 47	2 23	1 37	0 42	.....	.....	.....	.....	.....	.....
11 06	20	4 23	4 16	4 09	4 00	3 50	3 39	3 26	3 10	2 50	2 24	.....	.....	.....	.....	.....	.....
9 16S	25	4 44	4 38	4 33	4 26	4 18	4 10	4 01	3 50	3 37	3 31	2 29	.....	.....	.....	.....	.....
7 18S	Mar. 2	5 06	5 02	4 57	4 52	4 46	4 41	4 33	4 26	4 16	4 06	3 36	2 42	.....	.....	.....	.....
5 23	7	5 25	5 23	5 19	5 16	5 12	5 08	5 03	4 58	4 52	4 45	4 27	3 57	3 00	.....	.....	.....
3 25	12	5 44	5 43	5 41	5 40	5 37	5 35	5 32	5 29	5 26	5 22	5 14	4 58	4 33	3 37	.....	.....
1 27S	17	6 04	6 04	6 03	6 03	6 02	6 01	6 00	6 00	5 59	5 59	5 57	5 54	5 49	5 39	5 09	Rises
0 32N	22	6 23	6 24	6 24	6 25	6 26	6 27	6 28	6 30	6 32	6 34	6 41	6 50	7 06	7 33	9 16	Mar.19
2 30N	27	6 42	6 44	6 46	6 48	6 50	6 54	6 57	7 01	7 05	7 11	7 26	7 47	8 25	10 02	.....	.....
4 26N	Apr. 1	7 02	7 05	7 08	7 12	7 16	7 21	7 26	7 33	7 40	7 48	8 13	8 52	10 18	.....	.....	.....
6 21	6	7 21	7 26	7 30	7 36	7 42	7 49	7 57	8 07	8 18	8 28	9 09	10 24	.....	.....	.....	.....
8 13	11	7 40	7 47	7 52	8 00	8 08	8 17	8 29	8 43	9 00	9 14	10 25	.....	.....	.....	.....	.....
10 01	16	8 01	8 09	8 17	8 27	8 36	8 49	9 05	9 25	9 46	10 22	.....	.....	.....	.....	.....	.....
11 46	21	8 23	8 32	8 43	8 55	9 08	9 25	9 49	10 18	11 07	.....	.....	.....	.....	.....	.....	.....
13 25N	26	8 44	8 57	9 11	9 26	9 45	10 12	11 02	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 59N	May 1	9 07	9 24	9 40	10 03	10 32	11 34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 27	6	9 35	9 54	10 14	10 55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 48	11	10 02	10 31	11 17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 02	16	10 40	11 43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 04	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 05	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 53N	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22 31N	June 5	Sun does not set between—				Sun does not set between—				Sun does not set between—				Sun does not set between—			
23 00	10	May 21	May 16	May 12	May 9	May 5	May 2	Apr. 28	Apr. 25	Apr. 22	Apr. 19	Apr. 14	Apr. 8	Apr. 3	Mar. 29	Mar. 24	Mar. 19
23 18	15	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and
23 26	20	July 23;	July 27;	July 31;	Aug. 4;	Aug. 8;	Aug. 12;	Aug. 15;	Aug. 18;	Aug. 22;	Aug. 24;	Aug. 29;	Sept. 4;	Sept. 9;	Sept. 15;	Sept. 20;	Sept. 26;
23 24	25	64	73	81	88	96	103	110	116	123	128	138	150	160	171	181	192
23 12N	30	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
22 50N	July 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22 17	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 35	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 44	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 44	25	11 16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 36N	30	10 35	11 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 20N	Aug. 4	10 05	10 27	10 55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 57	9	9 35	9 52	10 12	10 31	11 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 28	14	9 09	9 22	9 37	9 55	10 19	11 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 53	19	8 43	8 54	9 06	9 20	9 37	10 02	10 28	11 26	.....	.....	.....	.....	.....	.....	.....	.....
11 13	24	8 19	8 28	8 37	8 47	9 02	9 18	9 37	10 02	10 34	.....	.....	.....	.....	.....	.....	.....
9 29N	29	7 55	8 03	8 10	8 18	8 29	8 40	8 55	9 12	9 34	10 01	.....	.....	.....	.....	.....	.....
7 40N	Sept. 3	7 32	7 38	7 44	7 51	7 59	8 08	8 19	8 31	8 45	9 04	9 56	.....	.....	.....	.....	.....
5 49	8	7 09	7 14	7 19	7 25	7 30	7 37	7 45	7 54	8 08	8 14	8 47	9 48	.....	.....	.....	.....
3 55	13	6 48	6 51	6 54	6 58	7 02	7 05	7 13	7 18	7 25	7 31	7 52	8 25	9 31	.....	.....	.....
2 00	18	6 25	6 27	6 29	6 32	6 32	6 37	6 42	6 44	6 49	6 51	7 02	7 20	7 57	9 08	.....	.....
0 03N	23	6 03	6 04	6 05	6 06	6 07	6 08	6 11	6 11	6 13	6 13	6 15	6 21	6 30	6 50	7 51	Sets
1 54S	28	5 41	5 41	5 41	5 41	5 40	5 39	5 40	5 38	5 37	5 34	5 29	5 24	5 14	4 55	3 56	Sept.26
3 51S	Oct. 3	5 19	5 18	5 16	5 15	5 12	5 10	5 09	5 05	5 06	4 56	4 42	4 24	3 54	2 42	.....	.....
5 46	8	4 58	4 55	4 51	4 47	4 45	4 41	4 38	4 31	4 25	4 18	3 54	3 20	2 14	.....	.....	.....
7 40	13	4 36	4 31	4 26	4 23	4 17	4 11	4 05	3 56	3 46	3 34	2 59	1 58	.....	.....	.....	.....
9 31	18	4 14	4 08	4 02	3 56	3 49	3 40	3 31	3 18	3 04	2 45	1 50	.....	.....	.....	.....	.....
11 18	23	3 51	3 44	3 37	3 29	3 18	3 07	2 54	2 36	2 13	1 47	.....	.....	.....	.....	.....	.....
13 02S	28	3 29	3 20	3 10	3 00	2 47	2 41	2 12	1 47	1 04	.....	.....	.....	.....	.....	.....	.....
14 40S	Nov. 2	3 06	2 56	2 45	2 30	2 13	1 50	1 18	0 30	.....	.....	.....	.....	.....	.....	.....	.....
16 12	7	2 44	2 30	2 15	1 56	1 34	0 56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 38	12	2 20	2 03	1 42	1 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 55	17	1 54	1 33	1 03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 05	22	1 30	0 56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 05S	27	0 58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 55S	Dec. 2	Sun does not rise between—				Sun does not rise between—				Sun does not rise between—				Sun does not rise between—			
22 35	7	Dec. 8	Nov.27	Nov.22	Nov.18	Nov.14	Nov.10	Nov. 6	Nov. 4	Nov. 1	Oct. 28	Oct. 23	Oct. 17	Oct. 12	Oct. 7	Oct. 1	Sept.27
23 04	12	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and
23 21	17	Jan.10;	Jan.16;	Jan.21;	Jan.25;	Jan.29;	Feb. 2;	Feb. 6;	Feb. 9;	Feb.11;	Feb.14;	Feb.20;	Feb.26;	Mar. 3;	Mar. 8;	Mar.13;	Mar.18;
23 27	22	39	51	61	69	77	85	93	98	103	110	121	133	143	153	164	173
23 21S	27	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
23 03 S	Jan. 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Declination.	Approx. date.	South Latitude.														
		0°	2°	4°	6°	8°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 05 S	Jan. 1	5 59	5 55	5 52	5 49	5 45	5 42	5 40	5 38	5 36	5 34	5 33	5 31	5 29	5 27	5 25	5 23
22 37	6	6 02	5 59	5 56	5 52	5 49	5 45	5 44	5 42	5 40	5 38	5 37	5 35	5 33	5 31	5 29	5 27
21 58	11	6 04	6 01	5 58	5 55	5 51	5 47	5 45	5 44	5 42	5 40	5 39	5 37	5 35	5 33	5 31	5 30
21 08	16	6 06	6 03	6 00	5 57	5 54	5 50	5 48	5 47	5 45	5 43	5 42	5 40	5 38	5 36	5 35	5 33
20 07	21	6 07	6 04	6 01	5 58	5 55	5 52	5 51	5 49	5 47	5 46	5 44	5 43	5 41	5 39	5 38	5 36
18 58	26	6 09	6 06	6 04	6 01	5 58	5 55	5 54	5 52	5 51	5 50	5 48	5 46	5 45	5 43	5 42	5 40
17 39 S	31	6 10	6 07	6 05	6 02	6 00	5 57	5 56	5 55	5 53	5 52	5 51	5 49	5 48	5 46	5 45	5 44
16 13 S	Feb. 5	6 10	6 08	6 06	6 04	6 01	5 58	5 57	5 56	5 54	5 53	5 52	5 51	5 50	5 48	5 47	5 46
14 40	10	6 11	6 09	6 07	6 05	6 02	6 00	6 00	5 58	5 57	5 56	5 55	5 54	5 53	5 52	5 50	5 50
13 01	15	6 11	6 09	6 07	6 06	6 03	6 01	6 01	6 00	5 59	5 58	5 57	5 56	5 55	5 54	5 53	5 52
11 16	20	6 10	6 09	6 07	6 06	6 04	6 02	6 02	6 01	6 00	5 59	5 58	5 57	5 57	5 56	5 55	5 54
9 28 S	25	6 10	6 09	6 07	6 06	6 04	6 03	6 02	6 02	6 01	6 00	6 00	5 59	5 59	5 58	5 57	5 56
7 30 S	Mar. 2	6 09	6 08	6 07	6 06	6 04	6 03	6 02	6 02	6 01	6 00	6 00	5 59	5 59	5 58	5 58	5 57
5 34	7	6 07	6 07	6 06	6 06	6 04	6 04	6 03	6 03	6 03	6 02	6 02	6 01	6 01	6 00	6 00	6 00
3 37	12	6 06	6 06	6 05	6 05	6 04	6 04	6 04	6 04	6 03	6 03	6 03	6 02	6 02	6 02	6 02	6 01
1 39 S	17	6 05	6 04	6 04	6 04	6 04	6 04	6 04	6 04	6 04	6 04	6 03	6 03	6 03	6 03	6 03	6 03
0 20 N	22	6 03	6 03	6 03	6 04	6 04	6 04	6 04	6 04	6 04	6 04	6 04	6 04	6 04	6 04	6 04	6 04
2 18 N	27	6 02	6 02	6 02	6 03	6 03	6 04	6 04	6 04	6 04	6 04	6 05	6 05	6 05	6 05	6 05	6 06
4 15 N	Apr. 1	6 00	6 01	6 01	6 02	6 03	6 03	6 03	6 03	6 03	6 04	6 04	6 04	6 05	6 05	6 05	6 05
6 09	6	5 59	6 00	6 00	6 02	6 02	6 03	6 04	6 04	6 05	6 05	6 06	6 06	6 07	6 07	6 08	6 08
8 02	11	5 57	5 59	6 00	6 01	6 02	6 03	6 04	6 04	6 05	6 06	6 06	6 07	6 08	6 08	6 09	6 09
9 51	16	5 56	5 58	5 59	6 00	6 02	6 03	6 04	6 05	6 06	6 06	6 07	6 08	6 09	6 09	6 10	6 11
11 35	21	5 55	5 57	5 58	6 00	6 02	6 03	6 04	6 05	6 06	6 07	6 08	6 09	6 10	6 11	6 12	6 12
13 15 N	26	5 54	5 56	5 58	6 00	6 02	6 03	6 04	6 05	6 06	6 07	6 08	6 09	6 10	6 11	6 12	6 13
14 50 N	May 1	5 53	5 55	5 58	6 00	6 02	6 04	6 05	6 06	6 08	6 09	6 10	6 11	6 12	6 13	6 14	6 16
16 19	6	5 53	5 55	5 58	6 00	6 02	6 05	6 06	6 07	6 09	6 10	6 11	6 12	6 14	6 15	6 16	6 17
17 42	11	5 52	5 55	5 58	6 00	6 03	6 05	6 07	6 08	6 10	6 11	6 12	6 14	6 15	6 16	6 18	6 19
18 56	16	5 52	5 55	5 58	6 01	6 03	6 06	6 08	6 09	6 11	6 12	6 14	6 15	6 17	6 18	6 20	6 21
19 58	21	5 52	5 56	5 58	6 01	6 04	6 07	6 09	6 10	6 12	6 14	6 15	6 17	6 18	6 20	6 22	6 23
21 00	26	5 53	5 56	5 59	6 02	6 05	6 08	6 10	6 12	6 13	6 15	6 17	6 18	6 20	6 21	6 23	6 25
21 48 N	31	5 53	5 57	6 00	6 03	6 06	6 10	6 12	6 13	6 15	6 16	6 18	6 20	6 22	6 23	6 25	6 27
22 28 N	June 5	5 54	5 58	6 01	6 05	6 08	6 11	6 13	6 14	6 16	6 18	6 20	6 22	6 23	6 25	6 27	6 29
22 57	10	5 55	5 59	6 02	6 06	6 09	6 12	6 14	6 16	6 18	6 20	6 21	6 23	6 25	6 27	6 29	6 31
23 17	15	5 56	6 00	6 03	6 07	6 10	6 13	6 14	6 16	6 18	6 20	6 22	6 23	6 25	6 27	6 29	6 31
23 26	20	5 57	6 01	6 04	6 08	6 11	6 15	6 17	6 18	6 20	6 22	6 24	6 26	6 28	6 30	6 32	6 33
23 25	25	5 58	6 02	6 05	6 09	6 12	6 16	6 18	6 19	6 21	6 23	6 25	6 27	6 29	6 31	6 32	6 34
23 14 N	30	5 59	6 03	6 06	6 10	6 13	6 16	6 17	6 19	6 21	6 23	6 25	6 27	6 29	6 31	6 32	6 34
22 52 N	July 5	6 00	6 04	6 07	6 11	6 14	6 17	6 18	6 20	6 21	6 23	6 25	6 27	6 29	6 31	6 32	6 34
22 21	10	6 01	6 04	6 08	6 11	6 14	6 18	6 19	6 21	6 23	6 24	6 26	6 28	6 30	6 32	6 33	6 35
21 40	15	6 02	6 05	6 08	6 11	6 14	6 18	6 19	6 21	6 23	6 24	6 26	6 28	6 29	6 31	6 33	6 34
20 50	20	6 02	6 05	6 08	6 11	6 14	6 17	6 19	6 21	6 22	6 24	6 25	6 27	6 28	6 30	6 32	6 33
19 50	25	6 02	6 05	6 08	6 11	6 14	6 17	6 18	6 20	6 21	6 23	6 24	6 26	6 27	6 29	6 30	6 32
18 43 N	30	6 02	6 05	6 08	6 11	6 13	6 16	6 17	6 19	6 20	6 21	6 23	6 24	6 26	6 27	6 28	6 30
17 28 N	Aug. 4	6 02	6 05	6 07	6 10	6 12	6 15	6 17	6 18	6 19	6 21	6 22	6 23	6 25	6 26	6 27	6 29
16 06	9	6 02	6 04	6 06	6 08	6 11	6 13	6 14	6 15	6 16	6 18	6 19	6 20	6 21	6 22	6 24	6 25
14 37	14	6 01	6 03	6 05	6 07	6 09	6 11	6 12	6 13	6 14	6 15	6 16	6 17	6 18	6 20	6 21	6 22
13 03	19	6 00	6 02	6 04	6 05	6 07	6 09	6 10	6 10	6 12	6 12	6 13	6 14	6 15	6 16	6 17	6 18
11 23	24	5 59	6 01	6 03	6 04	6 06	6 07	6 08	6 09	6 10	6 11	6 11	6 12	6 13	6 14	6 15	6 15
9 39 N	29	5 57	5 58	6 00	6 01	6 02	6 04	6 04	6 05	6 06	6 06	6 07	6 08	6 08	6 09	6 10	6 10
7 51 N	Sept. 3	5 56	5 57	5 58	5 59	6 00	6 01	6 01	6 02	6 02	6 03	6 03	6 04	6 04	6 05	6 06	6 06
6 00	8	5 54	5 55	5 56	5 56	5 57	5 58	5 58	5 59	5 59	5 59	6 00	6 00	6 00	6 01	6 02	6 02
4 07	13	5 52	5 53	5 53	5 54	5 54	5 55	5 55	5 55	5 55	5 56	5 56	5 56	5 56	5 57	5 57	5 57
2 11	18	5 51	5 51	5 51	5 51	5 51	5 52	5 52	5 52	5 52	5 52	5 52	5 52	5 52	5 52	5 53	5 53
0 15 N	23	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49
1 42 S	28	5 47	5 47	5 46	5 46	5 46	5 46	5 46	5 46	5 46	5 46	5 46	5 45	5 45	5 45	5 45	5 45
3 39 S	Oct. 3	5 45	5 45	5 44	5 44	5 43	5 43	5 43	5 43	5 42	5 42	5 42	5 41	5 41	5 41	5 40	5 40
5 35	8	5 44	5 43	5 42	5 41	5 40	5 40	5 39	5 39	5 38	5 38	5 37	5 37	5 36	5 36	5 35	5 35
7 28	13	5 43	5 41	5 40	5 39	5 38	5 37	5 36	5 36	5 35	5 35	5 34	5 33	5 33	5 32	5 31	5 31
9 20	18	5 42	5 40	5 38	5 37	5 36	5 35	5 35	5 34	5 33	5 33	5 32	5 31	5 30	5 29	5 29	5 28
11 08	23	5 41	5 39	5 37	5 36	5 34	5 33	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	5 24
12 51 S	28	5 40	5 38	5 36	5 34	5 32	5 31	5 31	5 30	5 29	5 27	5 27	5 25	5 24	5 23	5 22	5 21
14 30 S	Nov. 2	5 40	5 38	5 35	5 33	5 31	5 29	5 28	5 27	5 26	5 24	5 24	5 22	5 21	5 20	5 19	5 18
16 03	7	5 40	5 38	5 35	5 33	5 30	5 28	5 27	5 26	5 24	5 23	5 22	5 20	5 19	5 18	5 16	5 15
17 29	12	5 40	5 38	5 35	5 33	5 30	5 27	5 26	5 25	5 23	5 22	5 21	5 19	5 18	5 16	5 15	5 13
18 48	17	5 41	5 38	5 35	5 33	5 30	5 27	5 26	5 24	5 23	5 21	5 20	5 18	5 17	5 15	5 14	5 12
19 58	22	5 42	5 39	5 36	5 34	5 30	5 27	5 26	5 24	5 23	5 21	5 20	5 18	5 16	5 15	5 13	5 11
20 59 S	27	5 44	5 40	5 37	5 35	5 31	5 28	5 27	5 25	5 23	5 22	5 20	5 18	5 16	5 15	5 13	5 11
21 51 S	Dec. 2	5 45	5 42	5 39	5 36	5 32	5 29	5 28	5 26	5 24	5 22	5 21	5 19	5 17	5 15	5 13	5 11
22 32	7	5 47	5 43	5 40	5 37	5 33	5 30	5 28	5 26	5 25	5 23	5 21	5 19	5 17	5 15	5 13	5 11
23 02	12	5 50	5 46	5 43	5 40	5 36	5 32	5 30	5 28	5 26	5 24	5 23	5 21	5 19	5 17	5 15	5 13
23 20	17	5 52	5 49	5 45	5 42	5 38	5 34	5 32	5 30	5 28	5 26	5 25	5 23	5 21	5 19	5 17	5 15
23 27	22	5 54	5 51	5 48	5 44	5 41	5 37	5 35	5 34	5 32	5 30	5 28	5 26	5 24	5 22	5 20	5 18
23 22 S	27	5 57	5 54	5 50	5 47	5 43	5 39	5 37	5 35	5 33	5 31	5 30	5 28	5 26	5 24	5 22	5 20
23 05 S	Jan. 1	5 59	5 55	5 52	5 49	5 45	5 42	5 40	5 38	5 36	5 34	5 33	5 31	5 29	5 27	5 25	5 23

Declination.	Approx. date.	South Latitude.													
		0°	2°	4°	6°	8°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 03 S	Jan. 1	6 08	6 12	6 15	6 18	6 22	6 25	6 27	6 29	6 31	6 32	6 34	6 36	6 38	6 40	6 42	6 44
22 34	6	6 10	6 14	6 17	6 20	6 24	6 27	6 29	6 31	6 32	6 34	6 36	6 38	6 40	6 41	6 43	6 45
21 53	11	6 12	6 16	6 18	6 22	6 25	6 28	6 29	6 31	6 33	6 34	6 36	6 38	6 40	6 41	6 43	6 45
21 02	16	6 14	6 17	6 20	6 23	6 26	6 29	6 30	6 32	6 33	6 34	6 37	6 38	6 40	6 42	6 43	6 45
20 01	21	6 15	6 18	6 21	6 24	6 27	6 30	6 32	6 33	6 35	6 36	6 38	6 39	6 41	6 43	6 44	6 46
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9 16 S	25	6 17	6 18	6 19	6 21	6 22	6 24	6 25	6 25	6 26	6 27	6 27	6 28	6 29	6 29	6 30	6 31
7 18 S	Mar. 2	6 16	6 17	6 18	6 19	6 20	6 21	6 21	6 22	6 22	6 23	6 23	6 24	6 24	6 25	6 26	6 26
5 23	7	6 15	6 16	6 16	6 17	6 18	6 19	6 20	6 20	6 20	6 21	6 21	6 22	6 22	6 22	6 23	6 23
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1 27 S	17	6 12	6 12	6 12	6 12	6 12	6 13	6 13	6 13	6 13	6 13	6 13	6 13	6 13	6 13	6 14	6 14
0 32 N	22	6 11	6 10	6 10	6 10	6 10	6 11	6 11	6 11	6 11	6 11	6 11	6 10	6 11	6 10	6 10	6 10
2 30 N	27	6 09	6 08	6 08	6 08	6 07	6 08	6 08	6 07	6 07	6 07	6 07	6 07	6 07	6 06	6 06	6 06
4 26 N	Apr. 1	6 08	6 07	6 06	6 05	6 05	6 05	6 05	6 04	6 04	6 04	6 03	6 03	6 03	6 02	6 02	6 01
6 21	6	6 06	6 05	6 04	6 03	6 02	6 02	6 02	6 01	6 01	6 00	6 00	5 59	5 59	5 58	5 58	5 57
8 13	11	6 05	6 03	6 02	6 01	6 00	5 59	5 59	5 58	5 58	5 57	5 57	5 55	5 55	5 55	5 54	5 53
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11 46	21	6 03	6 00	5 59	5 57	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44
13 25 N	26	6 02	5 59	5 57	5 56	5 54	5 52	5 50	5 50	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41
14 59 N	May 1	6 01	5 58	5 56	5 54	5 52	5 50	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 40	5 39	5 38
16 27	6	6 00	5 58	5 55	5 53	5 50	5 49	5 48	5 47	5 45	5 44	5 43	5 41	5 40	5 39	5 38	5 36
17 48	11	6 00	5 57	5 55	5 52	5 50	5 47	5 45	5 44	5 43	5 42	5 40	5 39	5 37	5 36	5 34	5 33
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21 05	26	6 01	5 58	5 54	5 51	5 48	5 45	5 44	5 42	5 40	5 39	5 37	5 35	5 34	5 32	5 30	5 29
21 53 N	31	6 01	5 58	5 55	5 52	5 48	5 45	5 43	5 42	5 40	5 38	5 37	5 35	5 33	5 31	5 30	5 28
22 31 N	June 5	6 02	5 59	5 56	5 52	5 49	5 45	5 44	5 42	5 40	5 38	5 37	5 35	5 33	5 31	5 29	5 28
23 00	10	6 03	6 00	5 56	5 53	5 50	5 46	5 44	5 42	5 41	5 39	5 37	5 35	5 33	5 32	5 30	5 28
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23 26	20	6 05	6 02	5 58	5 55	5 51	5 48	5 46	5 44	5 43	5 41	5 39	5 37	5 35	5 33	5 31	5 29
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23 12 N	30	6 07	6 04	6 01	5 57	5 54	5 50	5 48	5 47	5 45	5 43	5 41	5 39	5 38	5 36	5 34	5 32
22 50 N	July 5	6 08	6 05	6 02	5 58	5 55	5 51	5 49	5 47	5 45	5 43	5 42	5 40	5 38	5 36	5 34	5 33
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18 36 N	30	6 10	6 07	6 05	6 02	5 59	5 57	5 55	5 54	5 53	5 51	5 50	5 48	5 47	5 46	5 44	5 43
17 20 N	Aug. 4	6 10	6 07	6 05	6 02	6 00	5 57	5 56	5 55	5 54	5 52	5 51	5 50	5 48	5 47	5 46	5 44
15 57	9	6 09	6 07	6 04	6 02	6 00	5 58	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 48	5 47	5 46
14 28	14	6 08	6 06	6 04	6 02	6 00	5 58	5 57	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 48	5 47
12 53	19	6 07	6 05	6 03	6 02	6 00	5 58	5 57	5 56	5 55	5 54	5 54	5 53	5 52	5 51	5 50	5 49
11 13	24	6 06	6 04	6 03	6 01	6 00	5 58	5 57	5 56	5 56	5 55	5 54	5 54	5 52	5 52	5 51	5 50
9 29 N	29	6 05	6 03	6 02	6 00	5 59	5 58	5 57	5 56	5 56	5 55	5 55	5 54	5 53	5 53	5 52	5 51
7 40 N	Sept. 3	6 03	6 02	6 01	6 00	5 59	5 58	5 57	5 57	5 56	5 56	5 55	5 55	5 54	5 54	5 53	5 52
5 49	8	6 02	6 00	6 00	5 59	5 58	5 57	5 57	5 56	5 56	5 56	5 55	5 55	5 55	5 54	5 54	5 53
3 55	13	6 00	5 59	5 58	5 58	5 57	5 57	5 57	5 56	5 56	5 56	5 56	5 55	5 55	5 55	5 55	5 54
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1 54 S	28	5 55	5 54	5 55	5 55	5 55	5 56	5 56	5 56	5 56	5 56	5 57	5 57	5 57	5 57	5 58	5 58
3 51 S	Oct. 3	5 53	5 53	5 54	5 54	5 55	5 56	5 56	5 56	5 57	5 57	5 57	5 58	5 58	5 58	5 59	5 59
5 46	8	5 52	5 52	5 53	5 54	5 55	5 56	5 56	5 56	5 57	5 57	5 58	5 58	5 59	5 59	6 00	6 00
7 40	13	5 50	5 51	5 52	5 53	5 54	5 56	5 56	5 57	5 57	5 58	5 59	5 59	6 00	6 00	6 01	6 02
9 31	18	5 49	5 50	5 51	5 53	5 54	5 56	5 57	5 57	5 58	5 59	6 00	6 00	6 01	6 02	6 03	6 04
11 18	23	5 48	5 50	5 51	5 53	5 55	5 56	5 57	5 58	5 59	6 00	6 01	6 02	6 03	6 04	6 05	6 06
13 02 S	28	5 48	5 49	5 51	5 53	5 55	5 57	5 58	5 59	6 00	6 01	6 02	6 04	6 04	6 06	6 07	6 08
14 40 S	Nov. 2	5 48	5 49	5 52	5 54	5 56	5 58	6 00	6 01	6 02	6 03	6 04	6 05	6 06	6 08	6 09	6 10
16 12	7	5 48	5 50	5 52	5 55	5 57	6 00	6 01	6 02	6 04	6 05	6 05	6 07	6 09	6 10	6 11	6 13
17 38	12	5 48	5 51	5 53	5 56	5 59	6 01	6 03	6 04	6 06	6 07	6 08	6 10	6 11	6 13	6 14	6 16
18 55	17	5 49	5 52	5 55	5 58	6 00	6 03	6 05	6 06	6 08	6 09	6 11	6 12	6 14	6 15	6 17	6 19
20 05	22	5 50	5 53	5 56	6 00	6 02	6 05	6 06	6 08	6 09	6 11	6 12	6 14	6 16	6 17	6 19	6 21
21 05 S	27	5 52	5 55	5 58	6 02	6 05	6 07	6 08	6 10	6 12	6 13	6 15	6 17	6 19	6 20	6 22	6 24
21 55 S	Dec. 2	5 53	5 57	6 00	6 04	6 07	6 10	6 12	6 14	6 16	6 17	6 19	6 21	6 23	6 24	6 26	6 28
22 35	7	5 55	5 59	6 02	6 06	6 10	6 12	6 13	6 15	6 17	6 19	6 21	6 23	6 25	6 27	6 28	6 30
23 04	12	5 58	6 02	6 05	6 09	6 12	6 15	6 14	6 18	6 20	6 22	6 24	6 26	6 27	6 29	6 31	6 33
23 21	17	3 00	6 04	6 08	6 11	6 15	6 18	6 20	6 22	6 24	6 26	6 27	6 29	6 31	6 33	6 35	6 37
23 27	22	6 03	6 07	6 10	6 14	6 17	6 20	6 22	6 23	6 25	6 27	6 29	6 31	6 33	6 35	6 37	6 39
23 21 S	27	6 05	6 09	6 13	6 16	6 20	6 23	6 25	6 27	6 29	6 30	6 32	6 34	6 36	6 38	6 40	6 42
23 08 S	Jan. 1	6 08	6 12	6 15	6 18	6 22	6 25	6 27	6 29	6 31	6 32	6 34	6 36	6 38	6 40	6 42	6 44

Declination.		Approx. date.	South Latitude.															
			21°	22°	23°	24°	25°	26°	27°	28°	29°	30°	31°	32°	33°	34°	35°	36°
°	′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23	05 S	Jan. 1	5 21	5 19	5 17	5 15	5 13	5 11	5 08	5 06	5 04	5 01	4 59	4 57	4 54	4 51	4 49	4 46
22	37	6	5 24	5 22	5 20	5 18	5 16	5 14	5 12	5 10	5 07	5 05	5 03	5 01	4 58	4 55	4 53	4 50
21	58	11	5 28	5 26	5 24	5 22	5 20	5 18	5 16	5 14	5 11	5 09	5 07	5 05	5 02	5 00	4 57	4 55
21	08	16	5 31	5 29	5 27	5 26	5 24	5 22	5 20	5 18	5 16	5 13	5 11	5 09	5 07	5 05	5 02	5 00
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17	39 S	31	5 41	5 40	5 38	5 37	5 35	5 33	5 32	5 30	5 29	5 27	5 25	5 23	5 21	5 19	5 17	5 15
16	13 S	Feb. 5	5 44	5 43	5 41	5 40	5 39	5 37	5 36	5 34	5 33	5 36	5 30	5 28	5 26	5 24	5 22	5 20
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13	01	15	5 50	5 49	5 48	5 46	5 45	5 44	5 43	5 42	5 41	5 39	5 38	5 37	5 35	5 34	5 33	5 31
11	16	20	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 37	5 36
9	28 S	25	5 54	5 54	5 53	5 52	5 51	5 50	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41
7	30 S	Mar. 2	5 56	5 56	5 55	5 55	5 54	5 53	5 53	5 52	5 51	5 51	5 50	5 49	5 48	5 48	5 47	5 46
5	34	7	5 58	5 58	5 57	5 57	5 56	5 56	5 55	5 55	5 54	5 54	5 53	5 53	5 52	5 52	5 51	5 51
3	37	12	6 00	6 00	5 59	5 59	5 59	5 59	5 58	5 58	5 58	5 57	5 57	5 57	5 56	5 56	5 55	5 55
1	39 S	17	6 02	6 02	6 01	6 01	6 01	6 01	6 01	6 01	6 01	6 00	6 00	6 00	6 00	6 00	6 00	5 59
0	20 N	22	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 04	6 04
2	18 N	27	6 05	6 05	6 05	6 05	6 05	6 06	6 06	6 06	6 06	6 06	6 07	6 07	6 07	6 07	6 08	6 08
4	15 N	Apr. 1	6 06	6 07	6 07	6 07	6 08	6 08	6 08	6 09	6 09	6 09	6 10	6 10	6 11	6 11	6 12	6 12
6	09	6	6 08	6 08	6 09	6 09	6 10	6 10	6 11	6 11	6 12	6 12	6 13	6 13	6 14	6 15	6 15	6 16
8	02	11	6 09	6 10	6 10	6 11	6 12	6 13	6 13	6 14	6 15	6 15	6 16	6 17	6 18	6 19	6 19	6 20
9	51	16	6 11	6 12	6 12	6 13	6 14	6 15	6 16	6 17	6 17	6 18	6 19	6 20	6 21	6 22	6 23	6 24
11	35	21	6 12	6 13	6 14	6 15	6 16	6 17	6 18	6 19	6 20	6 21	6 23	6 24	6 25	6 26	6 27	6 28
13	15 N	26	6 14	6 15	6 16	6 17	6 19	6 20	6 21	6 22	6 23	6 25	6 26	6 27	6 28	6 30	6 31	6 33
14	50 N	May 1	6 17	6 18	6 19	6 21	6 22	6 23	6 25	6 26	6 27	6 28	6 29	6 31	6 32	6 34	6 35	6 37
16	19	6	6 19	6 20	6 22	6 23	6 24	6 26	6 27	6 29	6 30	6 31	6 33	6 34	6 36	6 37	6 39	6 41
17	42	11	6 21	6 22	6 24	6 25	6 27	6 28	6 30	6 32	6 33	6 34	6 36	6 37	6 39	6 41	6 43	6 45
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19	58	21	6 25	6 26	6 28	6 30	6 32	6 34	6 35	6 37	6 39	6 40	6 42	6 44	6 46	6 48	6 50	6 52
21	00	26	6 27	6 29	6 30	6 32	6 34	6 36	6 38	6 40	6 42	6 43	6 44	6 47	6 49	6 52	6 54	6 56
21	48 N	31	6 29	6 31	6 32	6 34	6 36	6 38	6 40	6 42	6 45	6 46	6 48	6 50	6 52	6 55	6 57	6 59
22	28 N	June 5	6 31	6 33	6 34	6 37	6 39	6 41	6 43	6 45	6 47	6 49	6 52	6 54	6 56	6 59	7 01	7 03
22	57	10	6 33	6 35	6 36	6 38	6 41	6 43	6 45	6 47	6 49	6 52	6 54	6 56	6 59	7 01	7 04	7 06
23	17	15	6 33	6 35	6 37	6 39	6 41	6 44	6 46	6 48	6 50	6 52	6 55	6 57	6 59	7 02	7 05	7 07
23	26	20	6 35	6 38	6 40	6 42	6 44	6 46	6 48	6 50	6 52	6 55	6 57	6 59	7 02	7 04	7 07	7 10
23	25	25	6 36	6 39	6 40	6 42	6 45	6 47	6 49	6 51	6 53	6 56	6 58	7 00	7 03	7 06	7 08	7 11
23	14 N	30	6 37	6 39	6 41	6 43	6 45	6 47	6 49	6 51	6 54	6 56	6 58	7 01	7 03	7 06	7 08	7 11
22	52 N	July 5	6 37	6 39	6 41	6 43	6 45	6 47	6 49	6 51	6 54	6 56	6 58	7 00	7 03	7 05	7 08	7 10
22	21	10	6 37	6 39	6 41	6 43	6 45	6 47	6 49	6 51	6 53	6 55	6 57	6 59	7 02	7 04	7 07	7 09
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20	50	20	6 35	6 37	6 39	6 40	6 42	6 44	6 46	6 48	6 50	6 52	6 54	6 56	6 58	7 00	7 02	7 05
19	50	25	6 34	6 35	6 37	6 38	6 40	6 42	6 44	6 46	6 48	6 49	6 51	6 53	6 55	6 57	6 59	7 02
18	43 N	30	6 32	6 33	6 35	6 36	6 38	6 39	6 41	6 43	6 44	6 46	6 48	6 50	6 52	6 54	6 56	6 58
17	28 N	Aug. 4	6 31	6 32	6 33	6 34	6 36	6 37	6 39	6 40	6 42	6 44	6 45	6 47	6 49	6 50	6 52	6 54
16	06	9	6 26	6 28	6 29	6 30	6 32	6 33	6 34	6 35	6 37	6 40	6 41	6 43	6 44	6 46	6 47	6 49
14	37	14	6 23	6 24	6 25	6 26	6 28	6 29	6 30	6 31	6 33	6 35	6 36	6 38	6 39	6 41	6 42	6 43
13	08	19	6 19	6 20	6 21	6 22	6 24	6 25	6 26	6 27	6 28	6 30	6 31	6 32	6 34	6 35	6 36	6 37
11	28	24	6 16	6 17	6 18	6 19	6 20	6 21	6 22	6 23	6 24	6 25	6 26	6 27	6 28	6 29	6 30	6 31
9	39 N	29	6 12	6 13	6 14	6 14	6 15	6 16	6 17	6 17	6 18	6 19	6 20	6.21	6 22	6 23	6 24	6 25
7	51 N	Sept. 3	6 07	6 07	6 08	6 08	6 09	6 10	6 10	6 11	6 12	6 13	6 14	6 15	6 15	6 16	6 17	6 17
6	00	8	6 02	6 03	6 03	6 04	6 04	6 04	6 05	6 05	6 06	6 07	6 08	6 08	6 09	6 09	6 10	6 11
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2	11	18	5 53	5 53	5 53	5 54	5 53	5 53	5 54	5 54	5 54	5 55	5 55	5 55	5 55	5 55	5 55	5 56
0	15 N	23	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 49	5 48	5 48	5 48
1	42 S	28	5 44	5 44	5 44	5 44	5 44	5 43	5 43	5 43	5 43	5 42	5 42	5 42	5 42	5 41	5 41	5 41
3	39 S	Oct. 3	5 40	5 39	5 39	5 39	5 38	5 38	5 38	5 37	5 37	5 36	5 36	5 35	5 35	5 35	5 34	5 34
5	35	8	5 35	5 35	5 34	5 34	5 33	5 33	5 32	5 31	5 31	5 30	5 30	5 29	5 28	5 28	5 27	5 26
7	28	13	5 31	5 30	5 30	5 29	5 28	5 28	5 27	5 26	5 25	5 25	5 24	5 23	5 22	5 21	5 20	5 20
9	20	18	5 27	5 26	5 25	5 25	5 24	5 23	5 22	5 21	5 20	5 20	5 18	5 17	5 16	5 15	5 14	5 13
11	08	23	5 23	5 23	5 22	5 21	5 19	5 18	5 17	5 16	5 15	5 14	5 13	5 12	5 11	5 09	5 08	5 07
12	51 S	28	5 20	5 19	5 18	5 17	5 16	5 14	5 13	5 12	5 11	5 09	5 08	5 07	5 05	5 04	5 02	5 01
14	30 S	Nov. 2	5 16	5 15	5 14	5 12	5 11	5 10	5 08	5 07	5 05	5 05	5 03	5 02	5 00	4 59	4 57	4 55
16	03	7	5 14	5 12	5 11	5 10	5 08	5 06	5 05	5 04	5 02	5 01	5 00	4 58	4 56	4 54	4 53	4 51
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19	58	22	5 09	5 08	5 06	5 04	5 02	5 00	4 58	4 57	4 54	4 53	4 51	4 49	4 47	4 45	4 43	4 40
20	59 S	27	5 09	5 08	5 06	5 04	5 02	5 00	4 58	4 56	4 54	4 52	4 50	4 48	4 46	4 43	4 41	4 38
21	51 S	Dec. 2	5 09	5 08	5 06	5 04	5 02	5 00	4 58	4 56	4 53	4 51	4 49	4 46	4 44	4 41	4 39	4 36
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23	02	12	5 12	5 10	5 08	5 06	5 04	5 01	4 59	4 57	4 54	4 52	4 50	4 47	4 45	4 42	4 39	4 37
23	20	17	5 13	5 11	5 09	5 07	5 04	5 02	5 00	4 58	4 55	4 53	4 50	4 48	4 45	4 42	4 40	4 37
23	27	22	5 16	5 14	5 12	5 10	5 08	5 05	5 03	5 01	4 58	4 55	4 53	4 50	4 47	4 45	4 42	4 39
23	22 S	27	5 18	5 16	5 14	5 12	5 09	5 07	5 05	5 03	5 00	4 58	4 55	4 53	4 50	4 48	4 45	4 42
23	05 S	Jan. 1	5 21	5 19	5 17	5 15	5 13	5 11	5 08	5 06	5 04	5 01	4 59	4 57	4 54	4 51	4 49	4 46

Declination.	Approx. date.	*South Latitude.*															
		21°	22°	23°	24°	25°	26°	27°	28°	29°	30°	31°	32°	33°	34°	35°	36°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 03 S	Jan. 1	6 46	6 48	6 50	6 52	6 54	6 56	6 58	7 01	7 03	7 06	7 08	7 10	7 13	7 16	7 18	7 21
22 34	6	6 47	6 49	6 51	6 53	6 55	6 57	7 00	7 02	7 04	7 06	7 09	7 11	7 14	7 16	7 19	7 21
21 58	11	6 48	6 50	6 52	6 54	6 56	6 58	7 00	7 02	7 04	7 06	7 09	7 11	7 14	7 16	7 18	7 21
21 02	16	6 48	6 50	6 52	6 53	6 55	6 57	6 59	7 01	7 03	7 06	7 08	7 10	7 12	7 15	7 17	7 19
20 01	21	6 48	6 49	6 51	6 53	6 55	6 56	6 58	7 00	7 02	7 04	7 06	7 08	7 10	7 13	7 15	7 17
18 50 ●	26	6 47	6 48	6 50	6 51	6 53	6 55	6 57	6 58	7 00	7 02	7 04	7 06	7 08	7 10	7 12	7 14
17 31 S	31	6 45	6 47	6 48	6 49	6 51	6 53	6 54	6 56	6 58	6 59	7 01	7 03	7 05	7 07	7 09	7 10
16 04 S	Feb. 5	6 43	6 44	6 46	6 47	6 49	6 50	6 52	6 53	6 55	6 56	6 58	6 59	7 01	7 03	7 04	7 06
14 30	10	6 42	6 43	6 44	6 45	6 47	6 48	6 49	6 51	6 52	6 53	6 55	6 56	6 58	6 59	7 01	7 02
12 51	15	6 39	6 40	6 41	6 42	6 43	6 44	6 45	6 46	6 48	6 49	6 50	6 51	6 53	6 54	6 55	6 57
11 06	20	6 35	6 36	6 37	6 38	6 39	6 40	6 41	6 42	6 43	6 44	6 45	6 46	6 47	6 48	6 50	6 51
9 16 S	25	6 32	6 32	6 33	6 34	6 35	6 35	6 36	6 37	6 38	6 39	6 40	6 41	6 42	6 43	6 43	6 44
7 18 S	Mar. 2	6 28	6 28	6 29	6 29	6 30	6 31	6 31	6 32	6 33	6 33	6 34	6 35	6 36	6 36	6 37	6 38
5 22	7	6 23	6 24	6 24	6 25	6 25	6 26	6 26	6 27	6 27	6 28	6 28	6 29	6 29	6 30	6 30	6 31
3 25	12	6 19	6 19	6 20	6 20	6 20	6 21	6 21	6 21	6 21	6 22	6 22	6 23	6 23	6 23	6 24	6 24
1 27 S	17	6 15	6 15	6 15	6 15	6 15	6 15	6 15	6 16	6 16	6 16	6 16	6 16	6 16	6 16	6 17	6 17
0 32 N	22	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 09
2 30 N	27	6 06	6 05	6 05	6 05	6 05	6 05	6 04	6 04	6 04	6 04	6 03	6 03	6 03	6 03	6 02	6 02
4 26 N	Apr. 1	6 01	6 01	6 00	6 00	6 00	5 59	5 59	5 59	5 58	5 58	5 57	5 57	5 56	5 56	5 55	5 55
6 21	6	5 57	5 56	5 56	5 55	5 55	5 54	5 54	5 53	5 52	5 52	5 51	5 51	5 50	5 49	5 49	5 48
8 13	11	5 52	5 52	5 51	5 51	5 50	5 49	5 48	5 47	5 47	5 46	5 45	5 45	5 44	5 43	5 42	5 41
10 01	16	5 48	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 41	5 40	5 39	5 38	5 37	5 36	5 35
11 46	21	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 29	5 28
13 25 N	26	5 41	5 40	5 39	5 38	5 36	5 35	5 34	5 33	5 32	5 30	5 29	5 28	5 27	5 25	5 24	5 22
14 59 N	May 1	5 38	5 36	5 35	5 34	5 33	5 31	5 30	5 29	5 27	5 26	5 24	5 23	5 20	5 20	5 18	5 17
16 27	6	5 35	5 33	5 32	5 31	5 29	5 28	5 26	5 25	5 23	5 22	5 20	5 19	5 16	5 15	5 13	5 12
17 48	11	5 33	5 31	5 29	5 28	5 26	5 25	5 23	5 22	5 20	5 18	5 16	5 15	5 13	5 11	5 09	5 07
19 02	16	5 30	5 29	5 27	5 26	5 24	5 22	5 20	5 19	5 17	5 15	5 13	5 11	5 09	5 07	5 05	5 03
20 04	21	5 29	5 27	5 25	5 24	5 22	5 20	5 18	5 16	5 14	5 13	5 11	5 09	5 06	5 04	5 02	5 00
21 05	26	5 28	5 26	5 24	5 22	5 20	5 19	5 17	5 14	5 12	5 11	5 08	5 06	5 04	5 02	4 59	4 57
21 58 N	31	5 26	5 24	5 22	5 20	5 18	5 16	5 14	5 12	5 10	5 08	5 06	5 04	5 01	4 59	4 57	4 54
22 31 N	June 5	5 26	5 24	5 22	5 20	5 18	5 16	5 14	5 12	5 09	5 07	5 05	5 03	5 00	4 58	4 55	4 53
23 00	10	5 26	5 24	5 22	5 20	5 18	5 16	5 14	5 12	5 09	5 07	5 05	5 02	5 00	4 57	4 55	4 52
23 18	15	5 26	5 24	5 22	5 20	5 18	5 16	5 14	5 12	5 10	5 07	5 05	5 02	5 00	4 57	4 55	4 52
23 26	20	5 27	5 25	5 23	5 21	5 19	5 17	5 15	5 13	5 10	5 08	5 06	5 03	5 01	4 58	4 56	4 53
23 24	25	5 28	5 26	5 24	5 22	5 20	5 18	5 16	5 14	5 12	5 09	5 07	5 05	5 02	4 59	4 57	4 54
23 12 N	30	5 30	5 28	5 26	5 24	5 22	5 20	5 18	5 16	5 13	5 11	5 09	5 06	5 04	5 01	4 59	4 56
22 50 N	July 5	5 31	5 29	5 27	5 25	5 23	5 21	5 19	5 17	5 14	5 12	5 10	5 07	5 05	5 03	5 00	4 58
22 17	10	5 33	5 32	5 30	5 28	5 26	5 24	5 22	5 20	5 18	5 15	5 13	5 11	5 09	5 06	5 04	5 02
21 35	15	5 35	5 34	5 32	5 30	5 28	5 26	5 24	5 22	5 20	5 18	5 16	5 14	5 12	5 09	5 07	5 04
20 44	20	5 37	5 36	5 34	5 32	5 30	5 28	5 26	5 25	5 23	5 21	5 19	5 17	5 14	5 12	5 10	5 08
19 44	25	5 39	5 38	5 36	5 34	5 33	5 31	5 29	5 27	5 25	5 24	5 22	5 20	5 18	5 16	5 14	5 12
18 36 N	30	5 41	5 40	5 38	5 36	5 35	5 33	5 32	5 30	5 28	5 26	5 25	5 23	5 21	5 19	5 17	5 15
17 20 N	Aug. 4	5 43	5 41	5 40	5 39	5 37	5 36	5 34	5 33	5 31	5 29	5 28	5 26	5 24	5 23	5 21	5 19
15 57	9	5 44	5 43	5 42	5 41	5 39	5 38	5 37	5 35	5 34	5 32	5 31	5 29	5 28	5 26	5 24	5 23
14 28	14	5 46	5 45	5 44	5 43	5 42	5 40	5 39	5 38	5 37	5 35	5 34	5 33	5 31	5 30	5 28	5 27
12 53	19	5 48	5 47	5 46	5 45	5 44	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 33	5 32	5 31
11 13	24	5 49	5 48	5 47	5 46	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35
9 29 N	29	5 50	5 50	5 49	5 48	5 48	5 47	5 46	5 45	5 44	5 44	5 43	5 42	5 41	5 40	5 39	5 38
7 40 N	Sept. 3	5 52	5 51	5 51	5 50	5 50	5 49	5 48	5 48	5 47	5 46	5 46	5 45	5 44	5 44	5 43	5 42
5 49	8	5 53	5 53	5 52	5 52	5 51	5 51	5 50	5 50	5 50	5 49	5 49	5 48	5 48	5 47	5 47	5 46
3 55	13	5 54	5 54	5 54	5 53	5 53	5 53	5 52	5 52	5 52	5 52	5 51	5 51	5 51	5 51	5 50	5 50
2 00	18	5 54	5 54	5 54	5 54	5 54	5 54	5 54	5 54	5 54	5 53	5 53	5 53	5 53	5 53	5 53	5 53
0 03 N	23	5 57	5 57	5 57	5 57	5 57	5 57	5 57	5 57	5 57	5 57	5 57	5 57	5 57	5 57	5 58	5 58
1 54 S	28	5 58	5 58	5 58	5 58	5 59	5 59	5 59	6 00	6 00	6 00	6 00	6 00	6 01	6 01	6 01	6 02
3 51 S	Oct. 3	5 59	6 00	6 00	6 00	6 01	6 01	6 02	6 02	6 02	6 03	6 03	6 04	6 04	6 05	6 05	6 06
5 46	8	6 01	6 01	6 02	6 02	6 03	6 04	6 04	6 05	6 05	6 06	6 07	6 07	6 08	6 09	6 09	6 10
7 40	13	6 02	6 03	6 04	6 05	6 05	6 06	6 07	6 08	6 08	6 09	6 10	6 11	6 12	6 12	6 13	6 14
9 31	18	6 04	6 05	6 06	6 07	6 08	6 09	6 10	6 11	6 12	6 13	6 14	6 14	6 16	6 17	6 18	6 19
11 18	23	6 07	6 08	6 08	6 09	6 10	6 12	6 13	6 14	6 15	6 16	6 17	6 18	6 20	6 21	6 22	6 24
13 02 S	28	6 09	6 10	6 11	6 12	6 13	6 15	6 16	6 17	6 18	6 20	6 21	6 22	6 24	6 25	6 27	6 28
14 40 S	Nov. 2	6 11	6 13	6 14	6 15	6 17	6 18	6 19	6 21	6 22	6 23	6 24	6 26	6 27	6 29	6 31	6 33
16 12	7	6 14	6 16	6 17	6 18	6 20	6 21	6 23	6 24	6 26	6 27	6 28	6 30	6 32	6 34	6 36	6 37
17 38	12	6 17	6 19	6 20	6 22	6 23	6 25	6 27	6 28	6 30	6 31	6 33	6 35	6 37	6 39	6 41	6 43
18 55	17	6 20	6 22	6 23	6 25	6 27	6 29	6 30	6 32	6 34	6 35	6 37	6 39	6 41	6 43	6 46	6 48
20 05	22	6 22	6 24	6 26	6 28	6 30	6 32	6 33	6 35	6 37	6 40	6 42	6 44	6 46	6 48	6 51	6 53
21 05 S	27	6 25	6 28	6 29	6 31	6 33	6 35	6 37	6 39	6 41	6 44	6 46	6 48	6 51	6 53	6 55	6 58
21 55 S	Dec. 2	6 30	6 32	6 34	6 36	6 38	6 38	6 42	6 44	6 47	6 49	6 51	6 54	6 56	6 58	7 00	7 03
22 35	7	6 32	6 34	6 36	6 38	6 41	6 43	6 45	6 47	6 49	6 52	6 54	6 56	6 59	7 02	7 04	7 07
23 04	12	6 35	6 37	6 39	6 41	6 44	6 46	6 48	6 50	6 53	6 55	6 58	7 00	7 03	7 05	7 08	7 11
23 21	17	6 39	6 41	6 43	6 45	6 48	6 50	6 52	6 54	6 57	6 59	7 02	7 04	7 07	7 10	7 12	7 15
23 27	22	6 42	6 44	6 46	6 48	6 50	6 53	6 55	6 57	7 00	7 02	7 04	7 07	7 10	7 12	7 15	7 18
23 21 S	27	6 44	6 46	6 48	6 50	6 52	6 55	6 57	6 59	7 02	7 04	7 07	7 09	7 12	7 14	7 17	7 20
23 03 S	Jan. 1	6 46	6 48	6 50	6 52	6 54	6 56	6 58	7 01	7 03	7 06	7 08	7 10	7 13	7 16	7 18	7 21

Declination.	Approx. date.	South Latitude.															
		37°	38°	39°	40°	41°	42°	43°	44°	45°	46°	47°	48°	49°	50°	51°	52°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 05 S	Jan. 1	4 43	4 40	4 37	4 34	4 31	4 27	4 24	4 20	4 16	4 12	4 08	4 03	3 59	3 54	3 49	3 44
22 37	6	4 46	4 43	4 40	4 38	4 34	4 31	4 28	4 23	4 20	4 16	4 12	4 08	4 04	3 59	3 54	3 49
21 58	11	4 52	4 49	4 46	4 43	4 40	4 37	4 34	4 30	4 27	4 23	4 18	4 14	4 10	4 05	4 00	3 56
21 08	16	4 56	4 53	4 51	4 48	4 45	4 42	4 39	4 36	4 32	4 29	4 25	4 21	4 17	4 13	4 08	4 04
20 07	21	5 01	4 59	4 56	4 54	4 51	4 48	4 45	4 42	4 39	4 36	4 32	4 29	4 25	4 21	4 17	4 12
18 58	26	5 07	5 04	5 02	5 00	4 57	4 54	4 52	4 49	4 46	4 43	4 40	4 36	4 33	4 29	4 24	4 21
17 39 S	31	5 12	5 10	5 08	5 06	5 04	5 01	4 59	4 56	4 53	4 51	4 48	4 45	4 42	4 38	4 33	4 30
16 13 S	Feb. 5	5 18	5 16	5 14	5 12	5 10	5 08	5 06	5 03	5 01	4 58	4 56	4 53	4 50	4 47	4 43	4 40
14 40	10	5 24	5 22	5 20	5 18	5 16	5 14	5 12	5 10	5 08	5 06	5 04	5 01	4 59	4 56	4 52	4 49
13 01	15	5 29	5 27	5 26	5 24	5 23	5 21	5 19	5 17	5 15	5 13	5 11	5 09	5 07	5 04	5 01	4 59
11 16	20	5 34	5 33	5 31	5 30	5 29	5 27	5 26	5 24	5 22	5 21	5 19	5 17	5 15	5 13	5 10	5 08
9 28 S	25	5 39	5 38	5 37	5 36	5 35	5 33	5 32	5 31	5 30	5 28	5 27	5 25	5 24	5 22	5 19	5 17
7 30 S	Mar. 2	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 36	5 35	5 34	5 33	5 32	5 30	5 29	5 28
5 34	7	5 50	5 49	5 49	5 48	5 46	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 38	5 37
3 37	12	5 55	5 54	5 54	5 53	5 52	5 52	5 51	5 50	5 50	5 49	5 49	5 48	5 48	5 47	5 46	5 46
1 39 S	17	5 58	5 58	5 58	5 58	5 57	5 57	5 57	5 57	5 56	5 56	5 56	5 56	5 55	5 55	5 55	5 54
0 20 N	22	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03	6 03
2 18 N	27	6 07	6 07	6 08	6 08	6 08	6 07	6 09	6 09	6 09	6 09	6 10	6 10	6 10	6 11	6 11	6 11
4 15 N	Apr. 1	6 12	6 12	6 12	6 13	6 13	6 14	6 14	6 15	6 16	6 16	6 17	6 17	6 18	6 19	6 19	6 20
6 09	6	6 16	6 16	6 17	6 18	6 18	6 19	6 20	6 21	6 22	6 22	6 23	6 24	6 25	6 26	6 27	6 28
8 02	11	6 20	6 21	6 22	6 23	6 24	6 25	6 26	6 27	6 28	6 29	6 30	6 31	6 33	6 34	6 35	6 37
9 51	16	6 24	6 25	6 27	6 28	6 29	6 30	6 31	6 33	6 34	6 35	6 37	6 38	6 40	6 42	6 43	6 45
11 35	21	6 29	6 30	6 31	6 33	6 34	6 36	6 37	6 39	6 40	6 42	6 44	6 45	6 47	6 49	6 51	6 53
13 15 N	26	6 33	6 35	6 36	6 38	6 39	6 41	6 43	6 44	6 46	6 48	6 50	6 52	6 54	6 57	6 59	7 02
14 50 N	May 1	6 38	6 40	6 42	6 43	6 45	6 47	6 49	6 51	6 53	6 56	6 58	7 00	7 03	7 04	7 07	7 10
16 19	6	6 43	6 45	6 46	6 48	6 50	6 53	6 55	6 57	6 59	7 02	7 04	7 07	7 10	7 12	7 15	7 18
17 42	11	6 47	6 49	6 51	6 53	6 55	6 58	7 00	7 03	7 05	7 08	7 11	7 14	7 17	7 19	7 22	7 25
18 55	16	6 51	6 53	6 55	6 58	7 00	7 03	7 05	7 08	7 11	7 14	7 17	7 20	7 23	7 26	7 29	7 33
19 58	21	6 55	6 57	7 00	7 02	7 05	7 08	7 10	7 13	7 16	7 19	7 23	7 26	7 29	7 32	7 36	7 40
21 00	26	6 59	7 01	7 04	7 06	7 09	7 12	7 15	7 18	7 21	7 24	7 28	7 31	7 35	7 38	7 42	7 46
21 48 N	31	6 02	7 05	7 07	7 10	7 13	7 16	7 19	7 22	7 26	7 29	7 33	7 37	7 40	7 44	7 48	7 52
22 28 N	June 5	7 06	7 09	7 12	7 14	7 17	7 21	7 24	7 27	7 31	7 34	7 38	7 42	7 46	7 50	7 54	7 59
22 57	10	7 09	7 12	7 15	7 17	7 20	7 24	7 27	7 30	7 34	7 38	7 42	7 46	7 50	7 54	7 58	8 03
23 17	15	7 10	7 13	7 16	7 19	7 22	7 25	7 28	7 32	7 35	7 39	7 43	7 47	7 51	7 56	8 01	8 06
23 26	20	7 12	7 15	7 18	7 21	7 24	7 27	7 31	7 34	7 38	7 42	7 46	7 50	7 54	7 59	8 04	8 09
23 25	25	7 13	7 16	7 19	7 22	7 25	7 28	7 32	7 35	7 39	7 43	7 47	7 51	7 55	8 00	8 04	8 09
23 14 N	30	7 14	7 16	7 19	7 22	7 25	7 28	7 32	7 35	7 39	7 42	7 46	7 50	7 54	7 59	8 04	8 09
22 52 N	July 5	7 13	7 16	7 19	7 21	7 24	7 27	7 31	7 34	7 38	7 41	7 45	7 49	7 53	7 58	8 02	8 07
22 21	10	7 12	7 14	7 17	7 20	7 23	7 26	7 29	7 32	7 36	7 39	7 43	7 47	7 50	7 55	7 59	8 04
21 40	15	7 10	7 12	7 15	7 18	7 20	7 23	7 26	7 30	7 33	7 36	7 40	7 43	7 47	7 51	7 55	8 00
20 50	20	7 08	7 11	7 13	7 15	7 18	7 21	7 24	7 27	7 30	7 33	7 36	7 40	7 43	7 47	7 51	7 55
19 50	25	7 04	7 06	7 08	7 11	7 13	7 16	7 18	7 21	7 24	7 27	7 30	7 34	7 37	7 42	7 45	7 49
18 43 N	30	7 01	7 03	7 05	7 07	7 09	7 12	7 14	7 17	7 20	7 22	7 25	7 28	7 31	7 35	7 38	7 42
17 28 N	Aug. 4	6 56	6 58	7 00	7 02	7 04	7 06	7 09	7 11	7 13	7 16	7 19	7 22	7 25	7 28	7 31	7 35
16 06	9	6 51	6 53	6 54	6 56	6 58	7 00	7 02	7 04	7 07	7 09	7 11	7 14	7 16	7 19	7 22	7 25
14 37	14	6 45	6 47	6 48	6 50	6 52	6 53	6 55	6 57	6 59	7 01	7 03	7 05	7 08	7 10	7 13	7 15
13 03	19	6 39	6 40	6 42	6 43	6 45	6 46	6 48	6 49	6 51	6 53	6 55	6 57	6 59	7 02	7 04	7 06
11 23	24	6 32	6 33	6 35	6 36	6 37	6 39	6 40	6 41	6 43	6 44	6 46	6 48	6 49	6 52	6 54	6 56
9 39 N	29	6 26	6 27	6 28	6 29	6 30	6 32	6 33	6 34	6 35	6 36	6 38	6 39	6 40	6 42	6 44	6 45
7 51 N	Sept. 3	6 18	6 19	6 20	6 21	6 21	6 22	6 23	6 24	6 25	6 26	6 27	6 28	6 29	6 31	6 32	6 34
6 00	8	6 11	6 12	6 12	6 13	6 13	6 14	6 15	6 15	6 16	6 17	6 17	6 18	6 19	6 21	6 22	6 22
4 07	13	6 03	6 04	6 04	6 05	6 05	6 05	6 06	6 06	6 07	6 07	6 07	6 08	6 08	6 10	6 10	6 11
2 11	18	5 56	5 56	5 56	5 57	5 57	5 57	5 58	5 58	5 58	5 58	5 58	5 58	5 59	5 59	5 59	5 59
0 15 N	23	5 48	5 48	5 48	5 49	5 49	5 49	5 49	5 48	5 48	5 48	5 48	5 48	5 48	5 48	5 48	5 47
1 42 S	28	5 41	5 40	5 40	5 40	5 39	5 39	5 39	5 38	5 38	5 37	5 37	5 37	5 36	5 37	5 36	5 36
3 39 S	Oct. 3	5 33	5 33	5 32	5 32	5 31	5 30	5 30	5 29	5 28	5 28	5 27	5 26	5 26	5 26	5 25	5 24
5 35	8	5 26	5 25	5 24	5 24	5 23	5 22	5 21	5 20	5 19	5 18	5 17	5 10	5 15	5 15	5 14	5 13
7 28	13	5 19	5 18	5 17	5 16	5 15	5 14	5 13	5 11	5 10	5 09	5 08	5 06	5 05	5 04	5 03	5 01
9 20	18	5 12	5 11	5 09	5 09	5 08	5 06	5 05	5 04	5 02	5 01	4 59	4 58	4 56	4 54	4 52	4 50
11 08	23	5 05	5 04	5 02	5 01	4 59	4 58	4 56	4 55	4 53	4 51	4 49	4 47	4 45	4 44	4 42	4 40
12 51 S	28	4 59	4 58	4 56	4 55	4 53	4 51	4 49	4 47	4 45	4 43	4 41	4 39	4 36	4 35	4 32	4 30
14 30 S	Nov. 2	4 54	4 52	4 50	4 48	4 46	4 44	4 42	4 40	4 38	4 35	4 33	4 30	4 28	4 25	4 22	4 19
16 03	7	4 49	4 47	4 45	4 43	4 40	4 38	4 36	4 32	4 31	4 28	4 25	4 22	4 19	4 16	4 13	4 10
17 29	12	4 44	4 42	4 40	4 38	4 35	4 33	4 30	4 27	4 25	4 22	4 19	4 15	4 12	4 09	4 05	4 01
18 48	17	4 41	4 38	4 36	4 33	4 31	4 28	4 25	4 22	4 19	4 17	4 13	4 09	4 06	4 02	3 58	3 54
19 58	22	4 38	4 35	4 33	4 30	4 27	4 24	4 21	4 18	4 15	4 12	4 08	4 04	4 00	3 56	3 52	3 48
20 59 S	27	4 36	4 33	4 30	4 27	4 24	4 21	4 18	4 15	4 11	4 08	4 04	4 00	3 56	3 52	3 47	3 43
21 51 S	Dec. 2	4 33	4 31	4 28	4 25	4 22	4 18	4 15	4 12	4 08	4 04	4 00	3 57	3 53	3 48	3 43	3 39
22 32	7	4 33	4 30	4 27	4 24	4 21	4 18	4 14	4 10	4 07	4 03	3 59	3 55	3 51	3 46	3 41	3 36
23 02	12	4 34	4 31	4 28	4 24	4 21	4 18	4 14	4 10	4 06	4 03	3 58	3 54	3 49	3 44	3 39	3 34
23 20	17	4 34	4 31	4 28	4 25	4 21	4 18	4 14	4 11	4 07	4 04	3 58	3 54	3 49	3 44	3 39	3 34
23 27	22	4 36	4 33	4 30	4 27	4 23	4 20	4 17	4 13	4 09	4 05	4 00	3 56	3 51	3 47	3 41	3 36
23 22 S	27	4 39	4 36	4 33	4 30	4 27	4 23	4 20	4 16	4 12	4 08	4 03	3 59	3 55	3 50	3 44	3 39
23 05 S	Jan. 1	4 43	4 40	4 37	4 34	4 31	4 27	4 24	4 20	4 16	4 12	4 08	4 03	3 59	3 54	3 49	3 44

Declination.	Approx. date.	*South Latitude.*															
		37°	38°	39°	40°	41°	42°	43°	44°	45°	46°	47°	48°	49°	50°	51°	52°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 03 S	Jan. 1	7 24	7 27	7 30	7 33	7 36	7 40	7 43	7 47	7 51	7 55	7 59	8 03	8 08	8 13	8 18	8 23
22 34	6	7 24	7 27	7 30	7 33	7 36	7 39	7 43	7 46	7 50	7 54	7 58	8 02	8 07	8 12	8 16	8 22
21 53	11	7 24	7 27	7 29	7 32	7 35	7 38	7 42	7 45	7 49	7 52	7 56	8 00	8 04	8 09	8 14	8 19
21 02	16	7 22	7 25	7 27	7 30	7 33	7 36	7 39	7 42	7 46	7 49	7 53	7 57	8 00	8 05	8 11	8 16
20 01	21	7 21	7 23	7 25	7 28	7 31	7 34	7 37	7 40	7 43	7 46	7 49	7 53	7 57	8 02	8 06	8 09
18 50	26	7 17	7 20	7 22	7 24	7 27	7 30	7 32	7 35	7 38	7 41	7 44	7 48	7 51	7 56	8 00	8 03
17 31 S	31	7 14	7 16	7 18	7 20	7 22	7 25	7 27	7 30	7 32	7 35	7 38	7 42	7 45	7 49	7 52	7 56
16 04 S	Feb. 5	7 09	7 11	7 13	7 15	7 17	7 19	7 21	7 24	7 26	7 29	7 32	7 35	7 38	7 41	7 44	7 47
14 30	10	7 05	7 07	7 09	7 10	7 12	7 14	7 16	7 18	7 20	7 22	7 25	7 27	7 30	7 32	7 36	7 39
12 51	15	6 59	7 01	7 02	7 04	7 05	7 07	7 09	7 11	7 13	7 14	7 17	7 19	7 21	7 23	7 27	7 29
11 06	20	6 53	6 54	6 56	6 57	6 58	7 00	7 01	7 03	7 04	7 06	7 08	7 10	7 11	7 14	7 17	7 19
9 16 S	25	6 46	6 48	6 49	6 50	6 51	6 52	6 53	6 55	6 56	6 57	6 59	7 00	7 02	7 04	7 05	7 07
7 18 S	Mar. 2	6 40	6 41	6 41	6 42	6 43	6 44	6 45	6 46	6 47	6 48	6 49	6 51	6 52	6 53	6 54	6 56
5 23	7	6 33	6 33	6 33	6 34	6 35	6 36	6 37	6 37	6 38	6 39	6 40	6 41	6 42	6 42	6 43	6 44
3 25	12	6 25	6 26	6 26	6 26	6 27	6 27	6 28	6 28	6 29	6 29	6 30	6 30	6 31	6 32	6 32	6 33
1 27 S	17	6 18	6 18	6 18	6 18	6 19	6 19	6 19	6 19	6 20	6 20	6 20	6 20	6 21	6 21	6 21	6 21
0 32 N	22	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10
2 30 N	27	6 03	6 03	6 02	6 02	6 02	6 02	6 01	6 01	6 01	6 00	6 00	6 00	5 59	5 59	5 58	5 58
4 26 N	Apr. 1	5 56	5 55	5 55	5 54	5 54	5 53	5 52	5 52	5 51	5 51	5 50	5 50	5 49	5 48	5 48	5 48
6 21	6	5 48	5 48	5 47	5 46	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 40	5 39	5 38	5 38	5 37
8 13	11	5 41	5 40	5 39	5 38	5 38	5 36	5 36	5 34	5 33	5 32	5 31	5 29	5 28	5 27	5 27	5 25
10 01	16	5 34	5 33	5 32	5 31	5 30	5 28	5 27	5 26	5 24	5 23	5 22	5 20	5 19	5 17	5 16	5 14
11 46	21	5 28	5 26	5 25	5 24	5 22	5 21	5 19	5 18	5 16	5 14	5 13	5 11	5 09	5 07	5 06	5 04
13 25 N	26	5 22	5 20	5 19	5 17	5 15	5 14	5 12	5 10	5 08	5 06	5 04	5 02	5 00	4 58	4 56	4 54
14 59 N	May 1	5 15	5 13	5 11	5 10	5 08	5 06	5 04	5 02	5 00	4 58	4 55	4 53	4 51	4 48	4 45	4 42
16 27	6	5 10	5 07	5 05	5 04	5 03	5 00	4 57	4 55	4 53	4 51	4 48	4 45	4 43	4 39	4 36	4 34
17 48	11	5 06	5 03	5 01	4 59	4 56	4 54	4 52	4 49	4 47	4 44	4 41	4 38	4 35	4 32	4 28	4 26
19 02	16	4 51	4 59	4 57	4 54	4 52	4 49	4 47	4 44	4 41	4 38	4 35	4 32	4 29	4 25	4 21	4 19
20 04	21	4 57	4 55	4 53	4 50	4 48	4 45	4 42	4 39	4 36	4 33	4 30	4 26	4 24	4 19	4 15	4 12
21 05	26	4 55	4 52	4 49	4 47	4 44	4 41	4 39	4 35	4 32	4 29	4 25	4 22	4 18	4 14	4 10	4 07
21 53 N	31	4 52	4 49	4 46	4 44	4 41	4 38	4 34	4 31	4 28	4 25	4 21	4 17	4 13	4 09	4 04	4 01
22 31 N	June 5	4 50	4 47	4 45	4 42	4 39	4 36	4 33	4 29	4 26	4 22	4 18	4 14	4 10	4 06	4 02	3 58
23 00	10	4 49	4 47	4 44	4 41	4 38	4 35	4 32	4 28	4 24	4 21	4 17	4 13	4 09	4 04	3 59	3 55
23 18	15	4 49	4 47	4 44	4 41	4 38	4 34	4 31	4 28	4 24	4 20	4 16	4 12	4 08	4 03	3 58	3 54
23 26	20	4 50	4 47	4 44	4 42	4 38	4 35	4 32	4 28	4 25	4 21	4 17	4 13	4 09	4 04	3 59	3 54
23 24	25	4 52	4 49	4 46	4 43	4 40	4 36	4 33	4 30	4 26	4 22	4 18	4 14	4 10	4 05	4 00	3 56
23 12 N	30	4 54	4 51	4 48	4 45	4 42	4 39	4 36	4 32	4 28	4 25	4 21	4 17	4 13	4 08	4 03	3 58
22 50 N	July 5	4 55	4 52	4 49	4 47	4 43	4 40	4 37	4 34	4 30	4 27	4 24	4 20	4 16	4 11	4 07	4 02
22 17	10	4 58	4 55	4 52	4 50	4 47	4 44	4 41	4 37	4 34	4 31	4 27	4 23	4 19	4 15	4 10	4 06
21 35	15	5 02	4 59	4 57	4 54	4 51	4 48	4 46	4 42	4 39	4 36	4 32	4 29	4 25	4 21	4 17	4 12
20 44	20	5 06	5 03	5 01	4 58	4 56	4 53	4 50	4 47	4 44	4 41	4 37	4 34	4 31	4 27	4 23	4 18
19 44	25	5 09	5 07	5 05	5 02	5 00	4 57	4 55	4 52	4 49	4 46	4 43	4 40	4 37	4 33	4 29	4 25
18 36 N	30	5 12	5 10	5 08	5 06	5 03	5 01	4 59	4 56	4 53	4 51	4 48	4 45	4 42	4 39	4 35	4 32
17 20 N	Aug. 4	5 17	5 15	5 13	5 11	5 09	5 07	5 05	5 02	5 00	4 58	4 55	4 52	4 49	4 45	4 42	4 39
15 57	9	5 20	5 18	5 17	5 15	5 13	5 11	5 09	5 07	5 05	5 03	5 00	4 57	4 55	4 52	4 49	4 47
14 28	14	5 24	5 23	5 21	5 20	5 18	5 16	5 14	5 13	5 11	5 09	5 06	5 04	5 02	4 59	4 57	4 55
12 53	19	5 28	5 27	5 26	5 24	5 23	5 21	5 20	5 18	5 16	5 15	5 13	5 11	5 09	5 07	5 05	5 02
11 13	24	5 33	5 31	5 30	5 29	5 28	5 26	5 25	5 24	5 22	5 21	5 19	5 17	5 16	5 14	5 12	5 01
9 29 N	29	5 36	5 35	5 35	5 34	5 33	5 31	5 30	5 29	5 28	5 27	5 25	5 24	5 23	5 21	5 20	5 18
7 40 N	Sept. 3	5 41	5 40	5 39	5 38	5 37	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27
5 49	18	5 45	5 44	5 43	5 43	5 42	5 42	5 41	5 41	5 40	5 39	5 38	5 38	5 37	5 36	5 35	5 35
3 55	13	5 49	5 48	5 48	5 48	5 47	5 47	5 47	5 46	5 46	5 45	5 45	5 44	5 44	5 43	5 43	5 43
2 00	18	5 53	5 53	5 53	5 52	5 52	5 52	5 52	5 52	5 52	5 52	5 51	5 51	5 51	5 51	5 51	5 51
0 03 N	23	5 57	5 57	5 57	5 57	5 57	5 57	5 57	5 58	5 57	5 58	5 58	5 58	5 58	5 59	5 59	5 59
1 54 S	28	6 01	6 01	6 02	6 02	6 02	6 03	6 03	6 03	6 04	6 04	6 05	6 05	6 06	6 06	6 07	6 07
3 51 S	Oct. 3	6 05	6 06	6 06	6 07	6 08	6 08	6 09	6 10	6 10	6 11	6 12	6 12	6 13	6 14	6 15	6 16
5 46	8	6 10	6 11	6 11	6 12	6 13	6 14	6 15	6 15	6 17	6 17	6 19	6 20	6 21	6 22	6 23	6 24
7 40	13	6 14	6 15	6 16	6 17	6 18	6 19	6 20	6 22	6 23	6 24	6 26	6 27	6 28	6 29	6 30	6 32
9 31	18	6 19	6 20	6 21	6 23	6 24	6 25	6 27	6 28	6 30	6 31	6 33	6 35	6 36	6 37	6 39	6 41
11 18	23	6 24	6 25	6 27	6 28	6 30	6 31	6 33	6 35	6 37	6 38	6 40	6 42	6 44	6 46	6 48	6 50
13 02 S	28	6 29	6 31	6 32	6 34	6 36	6 37	6 39	6 41	6 43	6 45	6 48	6 50	6 52	6 54	6 57	6 59
14 40 S	Nov. 2	6 34	6 36	6 38	6 40	6 42	6 44	6 46	6 48	6 51	6 53	6 55	6 58	7 01	7 03	7 06	7 09
16 12	7	6 40	6 42	6 44	6 46	6 48	6 50	6 53	6 55	6 58	7 00	7 03	7 06	7 09	7 11	7 15	7 18
17 38	12	6 45	6 47	6 49	6 51	6 54	6 57	6 59	7 02	7 05	7 08	7 11	7 14	7 17	7 20	7 23	7 27
18 55	17	6 50	6 53	6 55	6 57	7 00	7 03	7 06	7 09	7 12	7 15	7 18	7 22	7 25	7 28	7 32	7 36
20 06	22	6 55	6 58	7 01	7 03	7 06	7 09	7 12	7 15	7 19	7 22	7 25	7 29	7 33	7 36	7 40	7 45
21 05 S	27	7 01	7 03	7 06	7 09	7 12	7 15	7 18	7 21	7 25	7 28	7 32	7 36	7 40	7 44	7 48	7 53
21 55 S	Dec. 2	7 05	7 08	7 11	7 14	7 17	7 21	7 24	7 27	7 31	7 35	7 39	7 43	7 47	7 51	7 56	8 01
22 35	7	7 10	7 13	7 16	7 19	7 22	7 25	7 29	7 33	7 36	7 40	7 44	7 49	7 53	7 58	8 03	8 08
23 04	12	7 14	7 17	7 20	7 23	7 26	7 29	7 33	7 37	7 41	7 45	7 49	7 54	7 58	8 03	8 09	8 14
23 21	17	7 18	7 21	7 24	7 27	7 31	7 34	7 38	7 42	7 46	7 50	7 54	7 59	8 03	8 07	8 13	8 18
23 27	22	7 21	7 24	7 27	7 30	7 34	7 37	7 42	7 45	7 49	7 52	7 57	8 01	8 06	8 11	8 17	8 22
23 21 S	27	7 23	7 26	7 29	7 32	7 35	7 39	7 43	7 47	7 51	7 54	7 58	8 03	8 07	8 13	8 18	8 23
23 03 S	Jan. 1	7 24	7 27	7 30	7 33	7 36	7 40	7 43	7 47	7 51	7 55	7 59	8 03	8 08	8 13	8 18	8 23

Declination.	Approx. date.	South Latitude.															
		53°	54°	55°	56°	57°	58°	59°	60°	61°	62°	63°	64°	65°	66°	67°	68°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 05 S	Jan. 1	3 37	3 31	3 25	3 17	3 10	3 01	2 52	2 41	2 30	2 15	2 01	1 37	1 15	.....	Sets	Sets
22 37	6	3 43	3 37	3 31	3 24	3 16	3 08	2 59	2 49	2 38	2 25	2 11	1 51	1 32	0 52	Jan. 10	Jan. 16.
21 58	11	3 50	3 44	3 38	3 32	3 25	3 17	3 09	2 59	2 50	2 37	2 25	2 07	1 50	1 26	0 44	.....
21 08	16	3 59	3 53	3 48	3 41	3 35	3 28	3 20	3 11	3 03	2 52	2 40	2 26	2 11	1 52	1 26	.....
20 07	21	4 08	4 03	3 57	3 51	3 45	3 38	3 31	3 23	3 15	3 05	2 55	2 42	2 29	2 13	1 54	1 28
18 58	26	4 16	4 12	4 07	4 02	3 56	3 50	3 44	3 36	3 29	3 21	3 11	3 00	2 50	2 35	2 20	2 01
17 39 S	31	4 26	4 22	4 18	4 13	4 07	4 01	3 56	3 50	3 44	3 36	3 28	3 19	3 09	2 57	2 45	2 30
16 13 S	Feb. 5	4 36	4 32	4 29	4 24	4 19	4 14	4 09	4 04	3 58	3 50	3 44	3 36	3 27	3 17	3 07	2 55
14 40	10	4 46	4 43	4 39	4 36	4 32	4 27	4 23	4 18	4 13	4 07	4 01	3 54	3 47	3 39	3 30	3 19
13 01	15	4 56	4 53	4 50	4 47	4 42	4 39	4 35	4 31	4 28	4 23	4 18	4 11	4 06	3 59	3 51	3 42
11 16	20	5 06	5 03	5 01	4 58	4 55	4 52	4 49	4 45	4 42	4 38	4 34	4 28	4 23	4 18	4 11	4 04
9 28 S	25	5 15	5 13	5 11	5 09	5 07	5 04	5 02	4 58	4 56	4 52	4 49	4 43	4 40	4 36	4 31	4 25
7 30 S	Mar. 2	5 25	5 23	5 22	5 20	5 18	5 16	5 14	5 12	5 09	5 07	5 04	5 00	4 57	4 54	4 49	4 45
5 34	7	5 34	5 33	5 32	5 31	5 29	5 28	5 26	5 25	5 23	5 21	5 19	5 16	5 14	5 11	5 07	5 05
3 37	12	5 44	5 43	5 42	5 41	5 41	5 39	5 38	5 37	5 36	5 35	5 34	5 31	5 30	5 28	5 25	5 23
1 39 S	17	5 53	5 52	5 52	5 52	5 51	5 51	5 50	5 50	5 49	5 48	5 48	5 46	5 45	5 44	5 43	5 42
0 20 N	22	6 02	6 02	6 02	6 02	6 02	6 02	6 02	6 02	6 02	6 02	6 02	6 01	6 01	6 01	6 00	6 00
2 18 N	27	6 11	6 11	6 12	6 12	6 12	6 13	6 13	6 14	6 15	6 15	6 16	6 15	6 16	6 17	6 17	6 18
4 15 N	Apr. 1	6 20	6 21	6 21	6 22	6 23	6 24	6 25	6 26	6 27	6 28	6 30	6 30	6 30	6 33	6 34	6 36
6 09	6	6 28	6 30	6 31	6 32	6 34	6 35	6 37	6 38	6 40	6 42	6 44	6 45	6 47	6 49	6 51	6 54
8 02	11	6 37	6 39	6 40	6 42	6 44	6 46	6 48	6 50	6 52	6 55	6 57	6 59	7 02	7 05	7 08	7 12
9 51	16	6 46	6 48	6 50	6 52	6 54	6 57	6 59	7 02	7 05	7 08	7 11	7 14	7 18	7 22	7 25	7 30
11 35	21	6 55	6 57	6 59	7 02	7 05	7 08	7 11	7 14	7 17	7 21	7 25	7 29	7 33	7 38	7 43	7 49
13 15 N	26	7 03	7 06	7 09	7 12	7 15	7 19	7 22	7 26	7 30	7 35	7 39	7 44	7 49	7 55	8 01	8 08
14 50 N	May 1	7 13	7 16	7 19	7 23	7 25	7 29	7 33	7 38	7 43	7 48	7 53	7 58	8 05	8 12	8 19	8 28
16 19	6	7 21	7 25	7 28	7 32	7 35	7 40	7 44	7 50	7 55	8 01	8 07	8 13	8 21	8 29	8 37	8 48
17 42	11	7 29	7 33	7 37	7 42	7 45	7 50	7 55	8 01	8 07	8 13	8 21	8 28	8 36	8 46	8 56	9 09
18 55	16	7 37	7 41	7 46	7 51	7 55	8 00	8 06	8 12	8 19	8 27	8 34	8 43	8 52	9 03	9 15	9 29
19 58	21	7 45	7 49	7 54	7 59	8 03	8 10	8 16	8 22	8 30	8 39	8 47	8 57	9 07	9 20	9 34	9 51
21 00	26	7 52	7 56	8 01	8 07	8 12	8 18	8 25	8 33	8 40	8 50	8 59	9 10	9 22	9 37	9 54	10 15
21 48 N	31	7 58	8 03	8 08	8 14	8 20	8 27	8 34	8 42	8 50	9 00	9 10	9 23	9 36	9 53	10 13	10 40
22 28 N	June 5	8 04	8 09	8 15	8 20	8 26	8 34	8 41	8 50	8 59	9 10	9 21	9 34	9 49	10 07	10 31	11 08
22 57	10	8 08	8 14	8 18	8 25	8 32	8 39	8 47	8 56	9 05	9 17	9 29	9 44	10 00	10 20	10 49	Does
23 17	15	8 11	8 17	8 23	8 29	8 36	8 44	8 52	9 01	9 11	9 23	9 35	9 51	10 08	10 31	11 05	not rise
23 26	20	8 14	8 20	8 26	8 32	8 39	8 47	8 55	9 04	9 14	9 26	9 38	9 54	10 11	10 35	11 12	June 10
23 25	25	8 15	8 21	8 26	8 33	8 40	8 48	8 56	9 05	9 15	9 27	9 39	9 55	10 12	10 35	11 10	to
23 14 N	30	8 14	8 20	8 25	8 32	8 39	8 47	8 54	9 04	9 13	9 25	9 37	9 53	10 08	10 30	11 02	July 3.
22 52 N	July 5	8 12	8 18	8 23	8 30	8 36	8 44	8 51	9 00	9 09	9 20	9 32	9 48	10 03	10 23	10 48	11 45
22 21	10	8 09	8 14	8 20	8 26	8 32	8 39	8 46	8 55	9 03	9 14	9 25	9 40	9 54	10 12	10 31	11 09
21 40	15	8 06	8 11	8 16	8 21	8 27	8 34	8 41	8 49	8 57	9 06	9 17	9 30	9 42	9 58	10 18	10 43
20 50	20	8 00	8 05	8 10	8 16	8 21	8 27	8 34	8 41	8 48	8 57	9 07	9 18	9 29	9 43	10 00	10 20
19 50	25	7 53	7 58	8 03	8 08	8 12	8 19	8 24	8 31	8 38	8 46	8 55	9 05	9 15	9 27	9 41	9 58
18 43 N	30	7 46	7 50	7 55	7 59	8 04	8 09	8 14	8 20	8 26	8 33	8 42	8 50	8 59	9 10	9 22	9 36
17 28 N	Aug. 4	7 38	7 42	7 45	7 50	7 55	7 59	8 04	8 09	8 15	8 21	8 29	8 36	8 44	8 53	9 03	9 15
16 06	9	7 28	7 32	7 35	7 39	7 43	7 47	7 51	7 56	8 02	8 08	8 14	8 21	8 27	8 35	8 43	8 54
14 37	14	7 18	7 22	7 25	7 28	7 31	7 35	7 39	7 43	7 48	7 54	7 59	8 05	8 10	8 17	8 24	8 33
13 03	19	7 09	7 11	7 14	7 17	7 20	7 23	7 27	7 30	7 34	7 39	7 43	7 48	7 53	7 58	8 04	8 12
11 23	24	6 58	7 00	7 02	7 05	7 08	7 10	7 13	7 16	7 19	7 24	7 27	7 31	7 35	7 40	7 45	7 51
9 39 N	29	6 47	6 48	6 50	6 53	6 56	6 57	6 59	7 02	7 04	7 08	7 11	7 14	7 17	7 21	7 25	7 30
7 51 N	Sept. 3	6 35	6 36	6 38	6 40	6 42	6 44	6 45	6 47	6 49	6 52	6 54	6 57	6 59	7 02	7 05	7 09
6 00	8	6 24	6 24	6 25	6 27	6 28	6 30	6 31	6 32	6 34	6 36	6 38	6 39	6 41	6 43	6 45	6 49
4 07	13	6 12	6 12	6 13	6 14	6 15	6 15	6 16	6 17	6 18	6 20	6 21	6 22	6 23	6 24	6 25	6 28
2 11	18	5 59	6 00	6 00	6 01	6 01	6 02	6 02	6 02	6 02	6 04	6 04	6 04	6 04	6 05	6 06	6 06
0 15 N	23	5 47	5 47	5 47	5 48	5 47	5 47	5 47	5 47	5 47	5 47	5 47	5 46	5 46	5 46	5 45	5 45
1 42 S	28	5 35	5 35	5 34	5 34	5 34	5 33	5 32	5 32	5 31	5 31	5 30	5 29	5 28	5 26	5 25	5 24
3 39 S	Oct. 3	5 23	5 22	5 21	5 21	5 20	5 19	5 18	5 16	5 15	5 14	5 13	5 11	5 09	5 07	5 05	5 04
5 35	8	5 11	5 10	5 08	5 08	5 07	5 05	5 03	5 01	4 59	4 58	4 56	4 54	4 52	4 48	4 45	4 41
7 28	13	5 00	4 58	4 56	4 55	4 53	4 51	4 49	4 46	4 44	4 42	4 39	4 36	4 32	4 26	4 24	4 20
9 20	18	4 48	4 46	4 44	4 42	4 40	4 37	4 35	4 31	4 28	4 26	4 22	4 18	4 14	4 09	4 04	3 58
11 08	23	4 37	4 34	4 32	4 30	4 27	4 24	4 21	4 17	4 13	4 10	4 05	4 01	3 55	3 49	3 43	3 36
12 51 S	28	4 26	4 24	4 21	4 17	4 14	4 10	4 06	4 02	3 58	3 54	3 49	3 43	3 37	3 30	3 22	3 13
14 30 S	Nov. 2	4 16	4 13	4 09	4 06	4 02	3 57	3 53	3 48	3 43	3 38	3 32	3 25	3 17	3 09	3 00	2 50
16 08	7	4 07	4 03	3 59	3 55	3 51	3 46	3 42	3 35	3 29	3 23	3 16	3 07	2 59	2 49	2 38	2 26
17 29	12	3 58	3 54	3 50	3 45	3 40	3 34	3 29	3 22	3 15	3 08	3 01	2 50	2 41	2 29	2 16	2 01
18 48	17	3 50	3 46	3 41	3 36	3 30	3 24	3 18	3 19	3 03	2 55	2 46	2 34	2 23	2 09	1 53	1 33
19 58	22	3 44	3 38	3 33	3 27	3 22	3 15	3 08	3 00	2 51	2 42	2 32	2 18	2 05	1 49	1 28	1 02
20 59 S	27	3 38	3 32	3 27	3 21	3 14	3 07	2 59	2 50	2 41	2 31	2 19	2 04	1 49	1 28	1 02	0 08
21 51 S	Dec. 2	3 33	3 27	3 22	3 15	3 08	3 00	2 52	2 42	2 32	2 21	2 08	1 50	1 33	1 06	0 22	.....
22 32	7	3 30	3 24	3 19	3 11	3 04	2 56	2 47	2 36	2 26	2 13	2 59	1 39	1 18	0 42	.....	.....
23 02	12	3 27	3 21	3 15	3 08	3 01	2 52	2 43	2 32	2 21	2 06	1 51	1 27	1 03	.....	.....	.....
23 20	17	3 28	3 21	3 15	3 07	3 00	2 50	2 41	2 30	2 18	2 02	1 47	1 21	0 55	Does not set between—		
23 27	22	3 30	3 23	3 17	3 09	3 01	2 52	2 43	2 31	2 19	2 03	1 48	1 21	0 54	Dec. 12 and Dec. 31: 20 days	Dec. 3 and Jan. 9; 38 days	Nov. 27 and Jan. 15; 50 days.
23 22 S	27	3 32	3 26	3 20	3 12	3 04	2 55	2 45	2 34	2 23	2 07	1 53	1 26	1 00			
23 05 S	Jan. 1	3 37	3 31	3 25	3 17	3 10	3 01	2 52	2 41	2 30	2 15	2 01	1 37	1 15			

Declination.	Approx. date.	South Latitude.															
		53°	54°	55°	56°	57°	58°	59°	60°	61°	62°	63°	64°	65°	66°	67°	68°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 08 S	Jan. 1	8 29	8 36	8 43	8 50	8 57	9 06	9 15	9 26	9 37	9 52	10 06	10 28	10 51	11 55	Sets	Sets
22 34	6	8 28	8 34	8 40	8 47	8 54	9 03	9 11	9 22	9 32	9 45	9 59	10 18	10 37	11 16	Jan. 10	Jan. 16
21 53	11	8 25	8 31	8 37	8 43	8 50	8 59	9 07	9 16	9 26	9 39	9 51	10 08	10 26	10 51	11 30	.....
21 02	16	8 21	8 26	8 32	8 39	8 45	8 52	8 59	9 08	9 18	9 29	9 40	9 54	10 08	10 28	10 54	11 57
20 01	21	8 15	8 20	8 25	8 31	8 37	8 44	8 50	8 58	9 06	9 16	9 26	9 39	9 52	10 07	10 27	10 56
18 50	26	8 08	8 12	8 17	8 22	8 28	8 34	8 40	8 47	8 54	9 03	9 12	9 23	9 34	9 47	10 03	10 21
17 31 S	31	8 01	8 05	8 09	8 13	8 18	8 23	8 29	8 36	8 42	8 50	8 58	9 07	9 18	9 28	9 41	9 57
16 04 S	Feb. 5	7 52	7 55	7 59	8 03	8 07	8 12	8 18	8 23	8 29	8 35	8 43	8 50	8 59	9 06	9 21	9 32
14 30	10	7 42	7 45	7 49	7 52	7 56	8 00	8 05	8 10	8 15	8 21	8 27	8 34	8 41	8 49	8 58	9 06
12 51	15	7 32	7 35	7 37	7 40	7 43	7 47	7 52	7 56	8 00	8 05	8 10	8 16	8 21	8 29	8 36	8 44
11 06	20	7 21	7 23	7 26	7 28	7 31	7 34	7 38	7 42	7 46	7 50	7 54	7 58	8 04	8 09	8 15	8 22
9 16 S	25	7 09	7 12	7 13	7 16	7 18	7 20	7 23	7 27	7 30	7 33	7 37	7 41	7 46	7 50	7 54	8 00
7 18 S	Mar. 2	6 57	6 59	7 01	7 03	7 05	7 07	7 09	7 11	7 14	7 17	7 19	7 22	7 25	7 29	7 33	7 37
5 23	7	6 46	6 47	6 49	6 50	6 51	6 53	6 54	6 56	6 59	7 00	7 02	7 04	7 07	7 10	7 13	7 15
3 25	12	6 34	6 34	6 36	6 37	6 38	6 39	6 40	6 41	6 43	6 44	6 45	6 47	6 48	6 51	6 52	6 54
1 27 S	17	6 22	6 22	6 23	6 24	6 24	6 25	6 25	6 26	6 27	6 28	6 28	6 29	6 30	6 31	6 32	6 33
0 32 N	22	6 10	6 09	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 11
2 30 N	27	5 58	5 57	5 58	5 57	5 57	5 56	5 56	5 56	5 56	5 55	5 54	5 54	5 53	5 52	5 51	5 50
4 26 N	Apr. 1	5 47	5 46	5 45	5 44	5 43	5 43	5 42	5 41	5 40	5 39	5 38	5 36	5 34	5 33	5 31	5 29
6 21	6	5 36	5 34	5 33	5 31	5 30	5 30	5 28	5 26	5 25	5 23	5 21	5 19	5 16	5 14	5 11	5 08
8 13	11	5 24	5 22	5 20	5 19	5 17	5 16	5 14	5 11	5 09	5 07	5 04	5 01	4 58	4 55	4 51	4 48
10 01	16	5 12	5 10	5 08	5 06	5 04	5 03	5 00	4 57	4 54	4 51	4 48	4 44	4 40	4 36	4 32	4 27
11 46	21	5 01	4 59	4 57	4 54	4 52	4 50	4 47	4 42	4 40	4 36	4 32	4 27	4 23	4 18	4 12	4 06
13 25 N	26	4 51	4 48	4 46	4 43	4 39	4 37	4 33	4 29	4 25	4 21	4 16	4 11	4 04	3 59	3 52	3 45
14 59 N	May 1	4 40	4 37	4 34	4 31	4 27	4 23	4 19	4 15	4 12	4 06	4 03	3 55	3 49	3 42	3 34	3 25
16 27	6	4 31	4 27	4 24	4 20	4 16	4 11	4 07	4 02	3 57	3 51	3 45	3 39	3 31	3 24	3 14	3 05
17 48	11	4 22	4 18	4 14	4 10	4 06	4 01	3 56	3 50	3 45	3 38	3 31	3 23	3 15	3 05	2 54	2 44
19 02	16	4 14	4 10	4 06	4 01	3 56	3 51	3 45	3 39	3 33	3 25	3 17	3 08	2 59	2 48	2 35	2 22
20 04	21	4 08	4 03	3 58	3 53	3 48	3 42	3 37	3 29	3 22	3 14	3 05	2 54	2 45	2 32	2 16	2 00
21 05	26	4 02	3 57	3 52	3 46	3 41	3 34	3 28	3 20	3 13	3 03	2 54	2 42	2 30	2 16	1 58	1 36
21 53 N	31	3 56	3 51	3 45	3 40	3 35	3 28	3 20	3 12	3 05	2 54	2 44	2 31	2 17	2 01	1 40	1 12
22 31 N	June 5	3 52	3 47	3 41	3 36	3 29	3 22	3 15	3 06	2 57	2 46	2 35	2 22	2 07	1 48	1 23	0 45
23 00	10	3 49	3 45	3 39	3 32	3 26	3 18	3 10	3 01	2 52	2 41	2 30	2 14	1 58	1 37	1 07	Does
23 18	15	3 48	3 43	3 38	3 31	3 24	3 16	3 08	2 59	2 49	2 37	2 23	2 09	1 52	1 29	0 55	not
23 26	20	3 48	3 43	3 37	3 31	3 24	3 15	3 07	2 58	2 48	2 36	2 24	2 07	1 51	1 27	0 50	rise
23 24	25	3 50	3 44	3 39	3 32	3 25	3 17	3 09	3 00	2 50	2 38	2 26	2 09	1 53	1 30	0 54	June 10
23 12 N	30	3 53	3 47	3 42	3 35	3 28	3 20	3 13	3 03	2 54	2 42	2 31	2 15	1 59	1 37	1 06	to
																	July 3.
22 50 N	July 5	3 57	3 51	3 46	3 39	3 33	3 25	3 18	3 09	3 00	2 48	2 37	2 22	2 06	1 46	1 20	0 28
22 17	10	4 01	3 55	3 50	3 44	3 38	3 31	3 24	3 15	3 07	2 56	2 46	2 32	2 17	2 00	1 38	1 04
21 35	15	4 07	4 02	3 56	3 51	3 45	3 38	3 31	3 23	3 15	3 06	2 56	2 44	2 30	2 15	1 56	1 30
20 44	20	4 14	4 09	4 03	3 58	3 53	3 46	3 40	3 33	3 25	3 17	3 07	2 56	2 45	2 31	2 14	1 54
19 44	25	4 21	4 17	4 11	4 06	4 01	3 55	3 50	3 43	3 35	3 27	3 19	3 09	2 59	2 47	2 32	2 17
18 36 N	30	4 28	4 23	4 19	4 14	4 09	4 04	3 59	3 53	3 47	3 40	3 31	3 23	3 14	3 04	2 52	2 38
17 20 N	Aug. 4	4 35	4 32	4 27	4 23	4 19	4 14	4 09	4 04	3 58	3 52	3 45	3 37	3 30	3 21	3 11	3 00
15 57	9	4 43	4 40	4 37	4 33	4 29	4 25	4 21	4 16	4 10	4 05	3 58	3 52	3 45	3 38	3 29	3 20
14 28	14	4 52	4 48	4 45	4 42	4 38	4 34	4 31	4 27	4 23	4 18	4 12	4 06	4 01	3 54	3 47	3 39
12 53	19	5 00	4 56	4 54	4 51	4 48	4 45	4 42	4 38	4 35	4 21	4 26	4 21	4 16	4 11	4 05	3 58
11 13	24	5 08	5 05	5 03	5 01	4 58	4 56	4 53	4 50	4 47	4 44	4 39	4 35	4 31	4 27	4 22	4 17
9 29 N	29	5 17	5 14	5 12	5 10	5 08	5 06	5 04	5 02	4 59	4 56	4 53	4 49	4 47	4 43	4 39	4 35
7 40 N	Sept. 3	5 25	5 23	5 22	5 20	5 18	5 17	5 15	5 13	5 12	5 09	5 06	5 04	5 01	4 59	4 56	4 53
5 49	8	5 34	5 32	5 31	5 30	5 29	5 27	5 26	5 25	5 24	5 22	5 20	5 18	5 16	5 14	5 12	5 10
3 55	13	5 42	5 40	5 40	5 39	5 39	5 38	5 37	5 36	5 36	5 35	5 33	5 32	5 31	5 30	5 29	5 27
2 00	18	5 51	5 50	5 49	5 49	5 50	5 49	5 49	5 48	5 48	5 48	5 47	5 46	5 46	5 46	5 45	5 45
0 03 N	23	5 59	5 58	5 58	5 59	5 59	5 59	6 00	6 00	6 00	6 01	6 00	6 01	6 01	6 01	6 42	6 03
1 54 S	28	6 08	6 08	6 08	6 09	6 10	6 10	6 11	6 12	6 13	6 14	6 14	6 15	6 16	6 17	6 19	6 20
3 51 S	Oct. 3	6 17	6 17	6 18	6 19	6 20	6 21	6 23	6 24	6 26	6 27	6 28	6 30	6 32	6 34	6 36	6 39
5 46	8	6 26	6 26	6 27	6 29	6 31	6 33	6 34	6 36	6 38	6 41	6 42	6 45	6 47	6 50	6 53	6 57
7 40	13	6 34	6 36	6 37	6 40	6 41	6 43	6 45	6 48	6 50	6 52	6 55	6 59	7 02	7 06	7 10	7 15
9 31	18	6 43	6 45	6 48	6 50	6 52	6 55	6 57	7 01	7 03	7 07	7 10	7 15	7 19	7 24	7 29	7 35
11 18	23	6 53	6 55	6 58	7 01	7 03	7 06	7 10	7 14	7 16	7 21	7 24	7 30	7 35	7 40	7 46	7 54
13 02 S	28	7 02	7 05	7 08	7 12	7 15	7 18	7 22	7 27	7 30	7 36	7 41	7 47	7 51	7 59	8 07	8 16
14 40 S	Nov. 2	7 12	7 16	7 19	7 23	7 26	7 31	7 35	7 40	7 45	7 51	7 57	8 04	8 11	8 19	8 29	8 39
16 12	7	7 22	7 26	7 30	7 34	7 38	7 43	7 48	7 54	7 59	8 06	8 12	8 21	8 29	8 38	8 50	9 04
17 38	12	7 31	7 36	7 40	7 45	7 49	7 55	8 01	8 07	8 13	8 21	8 29	8 39	8 49	8 58	9 12	9 29
18 55	17	7 41	7 46	7 50	7 56	8 01	8 07	8 13	8 21	8 29	8 37	8 46	8 58	9 08	9 21	9 37	9 58
20 05	22	7 50	7 55	8 00	8 06	8 12	8 19	8 26	8 34	8 43	8 53	9 02	9 16	9 28	9 46	10 05	10 34
21 06 S	27	7 58	8 04	8 10	8 16	8 22	8 30	8 37	8 46	8 56	9 07	9 18	9 34	9 48	10 09	10 37	.....
21 55 S	Dec. 2	8 06	8 12	8 18	8 25	8 31	8 39	8 48	9 58	9 07	9 20	9 33	9 51	10 08	10 34	11 22	.....
22 35	7	8 13	8 19	8 26	8 33	8 40	8 49	8 58	9 08	9 18	9 32	9 46	10 07	10 28	11 03	.....	.....
23 04	12	8 19	8 25	8 32	8 39	8 47	8 56	9 05	9 16	9 28	9 43	9 58	10 22	10 46	Does not set between—		
23 21	17	8 24	8 31	8 36	8 44	8 52	9 01	9 10	9 22	9 34	9 49	10 05	10 31	10 58	Dec. 12	Dec. 3	Nov. 27
23 27	22	8 28	8 34	8 40	8 48	8 56	9 05	9 14	9 26	9 38	9 54	10 09	10 36	11 03	and	and	and
23 21 S	27	8 30	8 36	8 42	8 50	8 58	9 07	9 16	9 27	9 39	9 55	10 10	10 35	11 00	Dec. 31.	Jan. 9; 38	Jan. 15; 50
23 08 S	Jan. 1	8 29	8 36	8 43	8 50	8 57	9 06	9 15	9 26	9 37	9 52	10 06	10 28	10 51	11 55	days.	days.

Declination.	Approx. date.	South Latitude. 69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	80°	82°	84°	86°	88°	90°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 05S	Jan. 1	Sun does not set between—				Sun does not set between—				Sun does not set between—				Sun does not set between—			
22 37	6	Nov.22	Nov.18	Nov.14	Nov.10	Nov. 7	Nov. 4	Oct. 31	Oct. 28	Oct. 25	Oct. 23	Oct. 17	Oct. 12	Oct. 6	Oct. 1	Sept.26	Sept.21
21 58	11	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and
21 08	16	Jan.20.	Jan.24.	Jan.28;	Feb. 1;	Feb. 4;	Feb. 7;	Feb.11;	Feb.14;	Feb.17;	Feb.19;	Feb.25;	Mar. 2;	Mar. 7;	Mar.12;	Mar.17;	Mar.23;
20 07	21	0 41	.....	76	84	90	96	104	110	116	120	132	142	153	163	173	184
18 58	26	1 36	0 36	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
17 39S	31	2 11	1 43	1 03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 13S	Feb. 5	2 41	2 22	2 00	1 27	0 40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 40	10	3 09	3 54	2 38	2 27	1 55	1 07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13 01	15	3 33	3 22	3 11	2 55	2 38	2 14	1 40	0 34	.....	.....	.....	.....	.....	.....	.....	.....
11 16	20	3 56	3 48	3 39	3 28	3 15	3 01	2 41	2 18	1 42	1 40	.....	.....	.....	.....	.....	.....
9 28S	25	4 18	4 12	4 05	3 57	3 46	3 36	3 22	3 07	2 46	2 30	.....	.....	.....	.....	.....	.....
7 30S	Mar. 2	4 41	4 36	4 30	4 24	4 15	4 06	3 58	3 47	3 34	3 20	2 23	.....	.....	.....	.....	.....
5 34	7	5 02	5 58	4 53	4 49	4 43	4 07	4 30	4 33	4 13	4 01	3 30	2 34	.....	.....	.....	.....
3 37	12	5 21	5 19	5 16	5 13	5 09	5 05	5 00	4 55	4 49	4 42	4 22	3 52	2 53	.....	.....	.....
1 39S	17	5 42	5 40	5 38	5 37	5 34	5 32	5 29	5 27	5 23	5 19	5 09	4 54	4 27	3 28	4 57	Sets
0 20N	22	6 00	6 00	5 59	5 59	5 58	5 58	5 58	5 57	5 56	5 51	5 53	5 50	5 44	5 32	8 58	Mar.23
2 18N	27	6 19	6 20	6 21	6 22	6 23	6 24	6 25	6 27	6 29	6 30	6 36	6 44	6 58	7 25	.....	.....
4 15N	Apr. 1	6 38	6 40	6 42	6 45	6 47	6 50	6 53	6 58	7 02	7 06	7 20	7 41	8 18	9 48	.....	.....
6 09	6	6 58	7 00	7 04	7 08	7 12	7 17	7 22	7 24	7 36	7 44	8 07	8 44	10 04	.....	.....	.....
8 02	11	7 16	7 21	7 26	7 32	7 37	7 45	7 52	8 00	8 13	8 23	9 01	10 10	.....	.....	.....	.....
9 51	16	7 36	7 42	7 48	7 56	8 04	8 13	8 24	8 35	8 51	9 10	10 11	.....	.....	.....	.....	.....
11 35	21	7 56	8 03	8 12	8 21	8 32	8 44	8 59	9 14	9 31	10 07	.....	.....	.....	.....	.....	.....
13 15N	26	8 15	8 25	8 35	8 47	9 01	9 15	9 37	10 02	.....	.....	.....	.....	.....	.....	.....	.....
14 50N	May 1	8 37	8 48	9 01	9 15	9 34	9 55	10 30	11 29	.....	.....	.....	.....	.....	.....	.....	.....
16 19	6	8 58	9 12	9 29	9 48	10 16	10 51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 42	11	9 21	9 39	10 00	10 28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 55	16	9 46	10 08	10 38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 58	21	10 11	10 42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 00	26	10 42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 48N	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22 28N	June 5	Sun does not rise between—				Sun does not rise between—				Sun does not rise between—				Sun does not rise between—			
22 57	10	June 1	May 26	May 21	May 16	May 12	May 9	May 5	May 2	Apr. 28	Apr. 25	Apr. 19	Apr. 14	Apr. 8	Apr 3	Mar. 29	Mar. 24
23 17	15	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and
23 26	20	July12;	July20;	July24;	July28;	Aug. 1;	Aug. 5;	Aug. 9;	Aug.12;	Aug.15;	Aug.19;	Aug.25;	Aug.30;	Sept. 5;	Sept.10;	Sept.15;	Sept.20;
23 25	25	42	56	65	74	82	89	97	103	110	117	129	139	151	161	171	181
23 14N	30	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
22 52N	July 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22 21	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 40	15	11 28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 50	20	10 47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 50	25	10 19	10 47	11 42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 43N	30	9 53	10 13	10 41	11 29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 28N	Aug. 4	9 27	9 44	10 03	10 30	11 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 06	9	9 05	9 18	9 32	9 51	10 14	10 49	11 49	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 37	14	8 42	8 52	9 03	9 18	9 36	9 57	10 23	11 14	.....	.....	.....	.....	.....	.....	.....	.....
13 03	19	8 19	8 28	8 37	8 48	9 02	9 17	9 35	10 01	10 35	.....	.....	.....	.....	.....	.....	.....
11 23	24	7 57	8 04	8 11	8 19	8 30	8 42	8 55	9 13	9 34	10 03	.....	.....	.....	.....	.....	.....
9 39N	29	7 35	7 40	7 46	7 53	8 01	8 08	8 20	8 32	8 47	9 05	10 02	.....	.....	.....	.....	.....
7 51N	Sept. 3	7 13	7 17	7 21	7 26	7 38	7 39	7 47	7 55	8 06	8 17	8 53	9 58	.....	.....	.....	.....
6 00	8	6 51	6 54	6 57	7 00	7 05	7 09	7 15	7 21	7 28	7 36	7 58	8 34	9 48	.....	.....	.....
4 07	13	6 29	6 31	6 33	6 35	6 38	6 40	6 44	6 47	6 52	6 46	7 09	7 29	8 03	9 26	.....	.....
2 11	18	6 06	6 07	6 08	6 09	6 11	6 11	6 13	6 14	6 16	6 09	6 22	6 30	6 42	7 07	8 28	Rises
0 15N	23	5 44	5 44	5 44	5 43	5 44	5 43	5 43	5 41	5 41	5 30	5 37	5 33	5 26	5 13	4 32	Sept.21
1 42S	28	5 22	5 21	5 20	5 17	5 16	5 14	5 14	5 08	5 05	4 54	4 50	4 34	4 07	3 06	.....	.....
3 39S	Oct. 3	5 00	4 58	4 56	4 52	4 49	4 45	4 41	4 35	4 29	4 21	4 01	3 30	2 30	.....	.....	.....
5 35	8	4 38	4 34	4 31	4 26	4 21	4 15	4 08	3 59	3 50	3 39	3 06	2 10	.....	.....	.....	.....
7 28	13	4 15	4 10	4 05	3 58	3 52	3 43	3 34	3 22	3 08	2 52	1 59	.....	.....	.....	.....	.....
9 20	18	3 52	3 45	3 39	3 20	3 21	3 10	2 57	2 40	2 19	1 51	.....	.....	.....	.....	.....	.....
11 08	23	3 28	3 20	3 11	3 00	2 47	2 32	2 14	1 48	1 09	.....	.....	.....	.....	.....	.....	.....
12 51S	28	3 04	2 54	2 41	2 27	2 12	1 51	1 20	0 25	.....	.....	.....	.....	.....	.....	.....	.....
14 30S	Nov. 2	2 38	2 26	2 10	1 52	1 30	0 46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 03	7	2 10	1 55	1 33	1 08	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 29	12	1 42	1 19	0 43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 48	17	1 12	0 24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 58	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 59S	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 51S	Dec. 2	Sun does not set between—				Sun does not set between—				Sun does not set between—				Sun does not set between—			
22 32	7	Nov.22	Nov.18	Nov.14	Nov.10	Nov. 7	Nov. 4	Oct. 31	Oct. 28	Oct. 25	Oct. 23	Oct. 17	Oct. 12	Oct. 6	Oct. 1	Sept.26	Sept.21
23 02	12	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and
23 20	17	Jan.20;	Jan.24.	Jan.28;	Feb. 1;	Feb. 4;	Feb. 7;	Feb.11;	Feb.14;	Feb.17;	Feb.19;	Feb.25;	Mar. 2;	Mar. 7;	Mar.12;	Mar.17;	Mar.23;
23 27	22	60	68	76	84	90	96	104	110	116	120	132	142	153	163	173	184
23 22S	27	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
23 05S	Jan. 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Declination.	Approx. date.	South Latitude.															
		69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	80°	82°	84°	86°	88°	90°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
23 03S	Jan. 1	Sun does not set between—				Sun does not set between—				Sun does not set between—				Sun does not set between—			
22 34	6	Nov.22	Nov.18	Nov.14	Nov.10	Nov. 7	Nov. 4	Oct. 31	Oct. 28	Oct. 25	Oct. 23	Oct. 17	Oct. 12	Oct. 6	Oct. 1	Sept.26	Sept.21
21 53	11	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and
21 02	16	Jan. 20	Jan. 24	Jan.28;	Feb. 1;	Feb. 4;	Feb. 7;	Feb.11;	Feb.14;	Feb.17;	Feb.19;	Feb.25;	Mar. 2;	Mar. 7;	Mar 12;	Mar.17;	May23;
20 01	21	11 37	.....	76	84	90	96	104	110	116	120	132	142	153	163	173	184
18 50	26	10 50	11 36	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
17 31S	31	10 16	10 40	11 16	.....												
16 04S	Feb. 5	9 47	10 03	10 25	10 55	11 39	.....										
14 30	10	9 19	9 32	9 46	10 06	10 28	11 12										
12 51	15	8 53	9 04	9 15	9 30	9 45	10 06	10 49	11 34								
11 06	20	8 29	8 38	8 47	8 58	9 10	9 24	9 44	10 05	10 41	.....						
9 16S	25	8 06	8 12	8 20	8 28	8 37	8 47	8 58	9 14	9 33	9 58						
7 18S	Mar. 2	7 42	7 47	7 53	7 59	8 06	8 15	8 23	8 33	8 46	9 00	9 53	.....				
5 23	7	7 20	7 23	7 28	7 32	7 38	7 43	7 50	7 57	8 07	8 17	8 47	9 39				
3 25	12	6 57	6 59	7 03	7 06	7 10	7 13	7 18	7 23	7 29	7 35	7 58	8 22	9 16	.....		
1 27S	17	6 35	6 36	6 38	6 40	6 42	6 44	6 47	6 49	6 52	6 55	7 04	7 18	7 42	8 35	.....	
0 32N	22	6 12	6 12	6 14	6 14	6 15	6 15	6 16	6 16	6 16	6 17	6 17	6 19	6 23	6 30	6 54	Sets
2 30N	27	5 50	5 49	5 49	5 47	5 46	5 45	5 44	5 42	5 40	5 37	5 30	5 21	5 06	4 34	2 40	Mar.23
4 26N	Apr. 1	5 28	5 26	5 24	5 21	5 19	5 16	5 13	5 08	5 04	4 58	4 43	4 21	3 42	2 00	.....	.....
6 21	6	5 06	5 03	5 00	4 56	4 52	4 46	4 41	4 34	4 27	4 18	3 58	3 13	1 45	.....	.....	.....
8 13	11	4 44	4 40	4 35	4 29	4 24	4 16	4 06	3 58	3 47	3 35	2 56	1 40	.....	.....	.....	.....
10 01	16	4 22	4 16	4 10	4 02	3 55	3 45	3 34	3 21	3 07	2 45	1 40	.....	.....	.....	.....	.....
11 46	21	4 00	3 52	3 45	3 35	3 25	3 11	2 55	2 39	2 19	1 42	.....	.....	.....	.....	.....	.....
13 25N	26	3 37	3 28	3 19	3 06	2 52	2 35	2 15	1 48	.....	.....	.....	.....	.....	.....	.....	.....
14 59N	May 1	3 16	3 04	2 52	2 36	2 20	1 54	1 19	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 27	6	2 52	2 38	2 23	2 02	1 37	0 55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 48	11	2 29	2 11	1 50	1 21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 02	16	2 05	1 41	1 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 04	21	1 40	1 07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 05	26	1 01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 53N	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22 31N	June 5	Sun does not rise between—				Sun does not rise between—				Sun does not rise between—				Sun does not rise between—			
23 00	10	June 1	May 26	May 21	May 16	May 12	May 9	May 5	May 2	Apr. 28	Apr. 25	Apr. 19	Apr. 14	Apr. 8	Apr. 3	Mar.29	Mar.24
23 18	15	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and
23 26	20	July 12;	July 20;	July 24;	July 28;	Aug. 1;	Aug. 5;	Aug. 9;	Aug. 12;	Aug.15;	Aug.19;	Aug.25;	Aug.30;	Sept. 5;	Sept.10;	Sept.15;	Sept.20;
23 24	25	42	56	65	74	82	89	97	103	110	117	129	139	151	161	171	181
23 12N	30	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
22 50N	July 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22 17	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 35	15	0 44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 44	20	1 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 44	25	1 56	1 30	0 41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 36N	30	2 22	2 02	1 36	0 52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 20N	Aug. 4	2 46	2 31	2 11	1 47	1 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 57	9	3 08	2 56	2 41	2 23	2 01	1 28	0 30	.....	.....	.....	.....	.....	.....	.....	.....	.....
14 28	14	3 30	3 20	3 07	2 45	2 37	2 17	1 51	1 05	.....	.....	.....	.....	.....	.....	.....	.....
12 53	19	3 50	3 42	3 31	3 21	3 08	2 54	2 35	2 12	1 30	0 25	.....	.....	.....	.....	.....	.....
11 13	24	4 10	4 03	3 55	3 47	3 36	3 25	3 11	2 55	2 36	2 08	.....	.....	.....	.....	.....	.....
9 29N	29	4 29	4 24	4 17	4 11	4 02	3 54	3 44	3 32	3 18	3 01	2 07	.....	.....	.....	.....	.....
7 40N	Sept. 3	4 48	4 44	4 39	4 34	4 28	4 22	4 14	4 06	3 56	3 44	3 12	2 11	.....	.....	.....	.....
5 49	8	5 07	5 04	5 00	4 57	4 52	4 48	4 42	4 37	4 30	4 23	4 02	3 28	2 21	.....	.....	.....
3 55	13	5 25	5 24	5 21	5 19	5 16	5 14	5 10	5 07	5 02	4 58	4 48	4 29	3 58	2 44	.....	.....
2 00	18	5 44	5 43	5 42	5 41	5 40	5 39	5 37	5 37	5 35	5 34	5 30	5 24	5 14	4 53	3 46	Rises
0 03N	23	6 02	6 03	6 03	6 04	6 04	6 05	6 05	6 06	6 07	6 09	6 13	6 18	6 27	6 44	7 38	Sept.21
1 54S	28	6 21	6 23	6 24	6 26	6 28	6 30	6 33	6 36	6 40	6 45	6 56	7 14	7 43	8 51	.....	.....
3 51S	Oct. 3	6 40	6 43	6 46	6 49	6 53	6 57	7 02	7 08	7 14	7 23	7 43	8 16	9 20	.....	.....	.....
5 46	8	7 00	7 04	7 08	7 13	7 18	7 25	7 32	7 41	7 51	8 03	8 35	9 35	.....	.....	.....	.....
7 40	13	7 19	7 25	7 30	7 38	7 45	7 54	8 04	8 16	8 31	8 49	9 43	.....	.....	.....	.....	.....
9 31	18	7 41	7 48	7 55	8 04	8 14	8 26	8 43	8 57	9 20	9 46	.....	.....	.....	.....	.....	.....
11 18	23	8 02	8 11	8 20	8 33	8 45	9 02	9 20	9 46	10 34	.....	.....	.....	.....	.....	.....	.....
13 02S	28	8 25	8 37	8 49	9 05	9 23	9 46	10 15	11 28	.....	.....	.....	.....	.....	.....	.....	.....
14 40S	Nov. 2	8 51	9 05	9 22	9 41	10 00	10 51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 12	7	9 32	9 36	9 58	10 30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 38	12	10 17	10 14	10 54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 55	17	10 54	11 16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 05	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 05S	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 55S	Dec. 2	Sun does not set between—				Sun does not set between—				Sun does not set between—				Sun does not set between—			
22 35	7	Nov.22	Nov.18	Nov.14	Nov.10	Nov. 7	Nov. 4	Oct. 31	Oct. 28	Oct. 25	Oct. 23	Oct. 17	Oct. 12	Oct. 6	Oct. 1	Sept.26	Sept.21
23 04	12	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and	and
23 21	17	Jan.20;	Jan.24;	Jan.28;	Feb. 1;	Feb. 4;	Feb. 7;	Feb.11;	Feb.14;	Feb.17;	Feb.19;	Feb.25;	Mar. 2;	Mar. 7;	Mar.12;	Mar.17;	Mar.23;
23 27	22	60	68	76	84	90	96	104	110	116	120	132	142	153	163	173	184
23 21S	27	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.	days.
23 03S	Jan. 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Beginning of morning twilight—North latitude.

Declination sun.	Approx. date.	0°	10°	20°	30°	40°	45°	50°	55°	60°	62½°	65°	67½°	70°	75°	80°	90°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	
23 05 S	Jan. 1	4 45	5 02	5 17	5 31	5 45	5 52	6 00	6 09	6 19	6 24	6 31	6 38	⊕ 6 47	⊕7 11	⊕7 59	Twi-
21 06	16	4 52	5 07	5 21	5 33	5 45	5 51	5 57	6 04	6 11	6 16	6 20	6 25	⊕ 6 31	⊕6 47	⊕7 16	light
17 39	31	4 58	5 10	5 20	5 30	5 38	5 41	5 45	5 48	5 51	5 53	5 54	5 55	5 57	⊕5 59	⊕5 59	begins
13 01 S	Feb. 15	5 00	5 09	5 16	5 21	5 24	5 24	5 24	5 23	5 20	5 18	5 15	5 12	5 06	4 49	⊕4 10	Jan. 30.
7 30 S	Mar. 2	5 00	5 04	5 07	5 06	5 03	5 00	4 56	4 49	4 39	4 33	4 24	4 13	3 59	3 11	.....	Sun
1 39 S	17	4 57	4 57	4 54	4 49	4 39	4 32	4 23	4 09	3 50	3 37	3 20	2 58	2 26	.....	.....	rises
4 15 N	Apr. 1	4 52	4 48	4 41	4 30	4 13	4 01	3 45	3 23	2 50	2 27	1 51	0 38	.....	.....	.....	Mar. 19.
9 51 N	16	4 47	4 38	4 26	4 10	3 45	3 28	3 03	2 29	1 27	.....	.....	.....	.....	.....	.....	
14 50 N	May 1	4 43	4 30	4 14	3 51	3 18	2 54	2 20	1 20	It is either twilight or continuous daylight (Table 10) throughout the whole 24 hours of each day, between—							
18 55	16	4 40	4 24	4 04	3 36	2 54	2 22	1 30	.....								
21 48	31	4 40	4 21	3 57	3 26	2 36	1 55	0 22	May 9	Apr. 23	Apr. 15	Apr. 8	Apr. 2	Mar. 26	Mar. 14	Mar. 1	
23 17	June 15	4 41	4 21	3 56	3 22	2 27	1 40	June 2	and	and	and	and	and	and	and	and	
23 14 N	30	4 45	4 25	3 59	3 25	2 31	1 44	July 15	Aug. 6	Aug. 22	Aug. 30	Sept. 5	Sept. 12	Sept. 17	Oct. 2	Oct. 16	
21 40 N	July 15	4 48	4 29	4 06	3 34	2 45	2 05	0 37	.....	.....	.....	.....	.....	.....	.....	.....	
18 43	30	4 50	4 34	4 14	3 47	3 05	2 34	1 43	.....	.....	.....	.....	.....	.....	.....	.....	
14 37	Aug. 14	4 50	4 38	4 22	3 59	3 27	3 03	2 29	1 31	.....	.....	.....	.....	.....	.....	.....	Sun sets
9 39 N	29	4 48	4 39	4 28	4 11	3 47	3 30	3 06	2 33	1 32	.....	.....	.....	.....	.....	.....	Sept. 25.
4 07 N	Sept. 13	4 44	4 40	4 33	4 22	4 05	3 53	3 33	3 16	2 44	2 20	1 46	0 38	.....	.....	.....	
1 42 S	28	4 39	4 39	4 37	4 31	4 22	4 15	4 05	3 52	3 33	3 20	3 03	2 45	2 02	.....	.....	
7 28	Oct. 13	4 34	4 38	4 40	4 40	4 37	4 34	4 30	4 23	4 13	4 06	3 58	3 47	3 33	2 44	.....	
12 51 S	28	4 30	4 38	4 45	4 50	4 53	4 53	4 53	4 51	4 49	4 46	4 43	4 39	4 34	4 16	⊕3 35	
17 29 S	Nov. 12	4 29	4 41	4 51	5 00	5 08	5 13	5 15	5 18	5 21	5 22	5 23	5 24	5 25	⊕5 27	⊕5 26	Twi-
20 59	27	4 30	4 45	4 58	5 11	5 22	5 28	5 34	5 41	5 48	5 52	5 57	6 02	⊕6 07	⊕6 23	⊕6 50	light
23 02	Dec. 12	4 35	4 52	5 07	5 21	5 35	5 42	5 50	5 59	6 08	6 14	6 21	6 28	⊕6 36	⊕7 01	⊕7 48	ends
23 22 S	27	4 42	4 59	5 16	5 29	5 43	5 51	5 59	6 08	6 19	6 24	6 31	6 39	⊕6 48	⊕7 14	⊕8 04	Nov. 14.

End of evening twilight—North latitude.

Declination sun.	Approx. date.	0°	10°	20°	30°	40°	45°	50°	55°	60°	62½°	65°	67½°	70°	75°	80°	90°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	
23 03 S	Jan. 1	7 22	7 05	6 50	6 36	6 22	6 15	6 07	5 58	5 48	5 43	5 36	5 29	⊕5 20	⊕4 56	⊕4 09	Twi-
21 02	16	7 27	7 12	6 59	6 47	6 35	6 29	6 23	6 16	6 09	6 05	6 00	5 55	⊕5 49	⊕5 35	⊕5 56	light
17 31	31	7 29	7 17	7 07	6 58	6 50	6 46	6 43	6 40	6 37	6 35	6 34	6 33	6 32	⊕6 31	⊕6 31	begins
12 51 S	Feb. 15	7 28	7 20	7 13	7 09	7 06	7 05	7 06	7 07	7 10	7 12	7 15	7 19	7 24	7 42	⊕8 23	Jan. 30.
7 18 S	Mar. 2	7 25	7 21	7 19	7 19	7 22	7 25	7 30	7 37	7 47	7 54	8 03	8 14	8 28	9 19	.....	Sun
1 27 S	17	7 21	7 21	7 23	7 29	7 38	7 46	7 56	8 09	8 29	8 42	8 59	9 22	9 55	.....	.....	rises
4 26 N	Apr. 1	7 16	7 21	7 28	7 39	7 56	8 08	8 24	8 47	9 20	9 45	10 21	11 47	.....	.....	.....	Mar. 19.
10 01 N	16	7 13	7 22	7 34	7 50	8 16	8 33	8 57	9 32	10 40	.....	.....	.....	.....	.....	.....	
14 59 N	May 1	7 12	7 24	7 41	8 04	8 37	9 01	9 36	10 37	It is either twilight or continuous daylight (Table 10) throughout the whole 24 hours of each day, between—							
19 02	16	7 13	7 29	7 49	8 17	8 59	9 32	10 24	.....								
21 58	31	7 15	7 34	7 58	8 30	9 19	10 00	11 39	May 2	Apr. 23	Apr. 15	Apr. 8	Apr. 2	Mar. 26	Mar. 14	Mar. 1	
23 18	June 15	7 19	7 39	8 04	8 38	9 33	10 20	June 2	and	and	and	and	and	and	and	and	
23 12 N	30	7 22	7 42	8 07	8 41	9 35	10 22	July 15	Aug. 6	Aug. 22	Aug. 30	Sept. 5	Sept. 12	Sept. 17	Oct. 2	Oct. 16	
21 35 N	July 15	7 23	7 42	8 05	8 37	9 26	10 05	11 31	.....	.....	.....	.....	.....	.....	.....	.....	
18 36	30	7 24	7 38	7 58	8 25	9 08	9 38	10 27	.....	.....	.....	.....	.....	.....	.....	.....	
14 28	Aug. 14	7 19	7 31	7 47	8 09	8 42	9 05	9 39	10 35	.....	.....	.....	.....	.....	.....	.....	Sun sets
9 29 N	29	7 14	7 22	7 34	7 50	8 14	8 31	8 54	9 28	10 26	.....	.....	.....	.....	.....	.....	Sept. 25.
3 55 N	Sept. 13	7 08	7 12	7 19	7 30	7 46	7 58	8 13	8 35	9 06	9 30	10 03	11 04	.....	.....	.....	
1 54 S	28	7 03	7 03	7 04	7 10	7 19	7 26	7 36	7 48	8 07	8 20	8 36	8 56	9 28	.....	.....	
7 40	Oct. 13	6 59	6 55	6 52	6 52	6 55	6 58	7 02	7 09	7 18	7 25	7 33	7 44	7 58	8 45	.....	
13 02 S	28	6 58	6 49	6 43	6 38	6 35	6 34	6 34	6 35	6 38	6 40	6 43	6 47	6 52	7 09	⊕7 46	
17 38 S	Nov. 12	7 00	6 48	6 37	6 28	6 20	6 16	6 13	6 10	6 07	6 05	6 04	6 02	6 02	⊕5 59	⊕5 59	Twi-
21 05	27	7 05	6 50	6 37	6 24	6 13	6 07	6 00	5 54	5 46	5 42	5 38	5 33	⊕5 27	⊕5 11	⊕4 43	light
23 04	Dec. 12	7 12	6 55	6 40	6 26	6 12	6 05	5 57	5 48	5 38	5 33	5 26	5 19	⊕5 10	⊕4 46	⊕3 59	ends
23 21 S	27	7 20	7 03	6 47	6 33	6 19	6 11	6 03	5 54	5 43	5 38	5 31	5 23	⊕5 14	⊕4 49	⊕3 58	Nov. 14.

⊕ Sun does not rise; twilight lasts from morning to evening, being strongest at noon.

Beginning of morning twilight—South latitude.

Declination sun.	Approx. date.	0°	10°	20°	30°	40°	45°	50°	55°	60°	62½°	65°	67½°	70°	75°	80°	90°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	
23 05 S	Jan. 1	4 45	4 25	4 00	3 26	2 32	1 46	Jan. 11	Nov. 10	It is either twilight or continuous daylight (Table							
21 08	16	4 52	4 34	4 11	3 41	2 53	2 15	1 00	and Feb. 2	10) throughout the whole 24 hours of each day, between—							
17 39	31	4 58	4 43	4 24	3 58	3 19	2 40	2 05	.....	Oct. 26	Oct. 19	Oct. 12	Oct. 5	Sept. 29	Sept 15	Sept. 2	
13 01 S	Feb. 15	5 00	4 49	4 35	4 14	3 45	3 23	2 53	2 06	Feb. 18	Feb. 25	Mar. 3	Mar. 10	Mar. 16	Mar. 29	Apr. 11	
7 30 S	Mar. 2	5 00	4 53	4 43	4 29	4 08	3 53	3 33	3 04	2 19	1 40	.....	.....	.....	.....	.....	Sun sets
1 39 S	17	4 57	4 54	4 49	4 41	4 27	4 17	4 05	3 47	3 21	3 03	2 39	2 04	0 51	.....	.....	Mar. 23.
4 15 N	Apr. 1	4 52	4 54	4 54	4 51	4 44	4 39	4 31	4 21	4 07	3 57	3 44	3 28	3 06	1 37	.....	
9 51 N	16	4 47	4 53	4 57	4 59	4 59	4 57	4 54	4 50	4 44	4 39	4 34	4 26	4 16	3 43	2 19	
14 50 N	May 1	4 43	4 53	5 01	5 07	5 12	5 14	5 15	5 16	5 16	5 15	5 14	5 12	5 09	5 00	⊕4 38	Twi-
18 55	16	4 40	4 52	5 05	5 15	5 24	5 29	5 33	5 38	5 42	5 45	5 47	5 50	5 53	⊕6 00	⊕6 11	light
21 48	31	4 40	4 55	5 09	5 22	5 35	5 41	5 48	5 55	6 04	6 08	6 13	6 19	⊕6 26	⊕6 45	⊕7 20	ends
23 17	June 15	4 41	4 58	5 14	5 28	5 42	5 50	5 58	6 06	6 17	6 23	6 29	6 37	⊕6 46	⊕7 12	⊕8 01	May 12.
23 14 N	30	4 45	5 02	5 17	5 31	5 45	5 53	6 01	6 09	6 20	6 25	6 32	6 40	⊕6 49	⊕7 14	⊕8 03	
21 40 N	July 15	4 48	5 04	5 17	5 32	5 43	5 49	5 56	6 03	6 11	6 16	6 20	6 27	⊕6 33	⊕6 52	⊕7 25	Twi-
18 43	30	4 50	5 03	5 14	5 25	5 34	5 38	5 43	5 47	5 51	5 53	5 56	5 58	6 01	⊕6 07	⊕6 16	light
14 37	Aug. 14	4 50	5 00	5 06	5 14	5 19	5 21	5 22	5 22	5 22	5 21	5 19	5 17	5 14	5 04	⊕4 40	begins
9 39 N	29	4 48	4 54	4 58	5 00	4 59	4 58	4 55	4 50	4 43	4 39	4 32	4 25	4 14	3 40	2 12	Aug. 2.
4 07 N	Sept. 13	4 44	4 46	4 46	4 42	4 36	4 30	4 23	4 12	3 57	3 47	3 35	3 19	2 56	1 24	.....	Sun
1 42 S	28	4 39	4 36	4 31	4 23	4 09	4 00	3 47	3 29	3 03	2 45	2 20	1 44	0 30	.....	.....	rises
7 28	Oct. 13	4 34	4 27	4 17	4 03	3 42	3 27	3 07	2 39	1 53	1 15	.....	.....	.....	.....	.....	Sept. 21.
12 51 S	28	4 30	4 19	4 04	3 44	3 15	2 54	2 24	1 38	.....	.....	.....	.....	.....	.....	.....	
17 29 S	Nov. 12	4 29	4 14	3 55	3 29	2 49	2 22	1 38	Nov. 10	It is either twilight or continuous daylight (Table							
20 59	27	4 30	4 12	3 50	3 19	2 32	1 55	0 42	and Feb. 2	10) throughout the whole 24 hours of each day, between—							
23 02	Dec. 12	4 35	4 15	3 50	3 16	2 23	1 37	Dec. 3	.....	Oct. 26	Oct. 19	Oct. 12	Oct. 5	Sept. 29	Sept 15	Sept. 2	
23 22 S	27	4 42	4 22	3 57	3 22	2 28	1 40	Jan. 11	.....	Feb. 18	Feb. 25	Mar. 3	Mar. 10	Mar. 16	Mar. 29	Apr. 11	

End of evening twilight—South latitude.

Declination sun.	Approx. date.	0°	10°	20°	30°	40°	45°	50°	55°	60°	62½°	65°	67½°	70°	75°	80°	90°
° ′		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	
23 08 S	Jan. 1	7 22	7 41	8 07	8 41	9 34	10 20	Jan. 11	Nov. 10	It is either twilight or continuous daylight (Table							
21 02	16	7 27	7 46	8 08	8 39	9 26	10 04	11 17	and Feb. 2	10) throughout the whole 24 hours of each day, between—							
17 31	31	7 29	7 44	8 08	8 29	9 07	9 36	10 20	.....	Oct. 26	Oct. 19	Oct. 12	Oct. 5	Sept. 29	Sept 15	Sept. 2	
12 51 S	Feb. 15	7 28	7 39	7 54	8 14	8 43	9 05	9 34	10 20	Feb. 18	Feb. 25	Mar. 3	Mar. 10	Mar. 16	Mar. 29	Apr. 11	
7 18 S	Mar. 2	7 25	7 32	7 41	7 55	8 16	8 31	8 51	9 19	10 03	10 41	.....	.....	.....	.....	.....	Sun sets
1 27 S	17	7 21	7 23	7 28	7 36	7 49	7 59	8 11	8 29	8 54	9 12	9 36	10 10	11 07	.....	.....	Mar. 23.
4 26 N	Apr. 1	7 16	7 14	7 14	7 17	7 24	7 29	7 36	7 46	8 00	8 10	8 22	8 38	9 00	10 25	.....	
10 01 N	16	7 13	7 07	7 03	7 00	7 01	7 02	7 04	7 08	7 15	7 20	7 25	7 33	7 42	8 14	9 35	
14 59 N	May 1	7 12	7 02	6 53	6 47	6 42	6 40	6 38	6 38	6 38	6 38	6 39	6 41	6 43	6 51	⊕7 13	Twi-
19 02	16	7 13	6 59	6 48	6 37	6 28	6 23	6 19	6 14	6 09	6 07	6 04	6 01	5 58	⊕5 50	⊕5 39	light
21 53	31	7 15	6 59	6 45	6 33	6 20	6 13	6 06	5 59	5 51	5 46	5 41	5 35	⊕5 28	⊕5 08	⊕4 33	ends
23 18	June 15	7 19	7 02	6 47	6 32	6 18	6 10	6 02	5 54	5 43	5 37	5 31	5 23	⊕5 14	⊕4 48	⊕3 59	May 12.
23 12 N	30	7 22	7 05	6 50	6 36	6 21	6 14	6 06	5 57	5 47	5 41	5 35	5 27	⊕5 18	⊕4 53	⊕4 05	
21 35 N	July 15	7 23	7 08	6 54	6 41	6 29	6 22	6 16	6 09	6 01	5 56	5 51	5 46	⊕5 39	⊕5 21	⊕4 49	Twi-
18 36	30	7 24	7 09	6 58	6 48	6 39	6 35	6 31	6 26	6 22	6 20	6 18	6 15	6 13	⊕6 07	⊕5 59	light
14 28	Aug. 14	7 19	7 09	7 02	6 55	6 51	6 49	6 48	6 48	6 49	6 50	6 51	6 53	6 56	7 07	⊕7 33	begins
9 29 N	29	7 14	7 08	7 04	7 03	7 03	7 05	7 08	7 13	7 20	7 25	7 31	7 39	7 50	8 25	9 57	Aug. 2.
3 56 N	Sept. 13	7 08	7 07	7 07	7 10	7 17	7 23	7 30	7 41	7 56	8 07	8 20	8 37	8 59	10 36	.....	Sun
1 54 S	28	7 03	7 05	7 11	7 19	7 33	7 43	7 56	8 14	8 41	9 00	9 24	10 01	11 29	.....	.....	rises
7 40	Oct. 13	6 59	7 06	7 16	7 30	7 52	8 07	8 27	8 56	9 42	10 23	.....	.....	.....	.....	.....	Sept. 21.
13 02 S	28	6 58	7 09	7 24	7 44	8 14	8 35	9 05	9 52	.....	.....	.....	.....	.....	.....	.....	
17 38 S	Nov. 12	7 00	7 15	7 34	8 00	8 39	9 08	9 52	Nov. 10	It is either twilight or continuous daylight (Table							
21 05	27	7 05	7 23	7 46	8 16	9 04	9 42	10 56	and Feb. 2	10) throughout the whole 24 hours of each day, between—							
23 04	Dec. 12	7 12	7 32	7 57	8 31	9 24	10 11	Dec. 3	.....	Oct. 26	Oct. 19	Oct. 12	Oct. 5	Sept. 29	Sept 15	Sept. 2	
23 21 S	27	7 20	7 40	8 05	8 39	9 34	10 22	Jan. 11	.....	Feb. 18	Feb. 25	Mar. 3	Mar. 10	Mar. 16	Mar. 29	Apr. 11	

⊕ Sun does not rise; twilight lasts from morning to evening, being strongest at noon.

TABLE 12.—REDUCTION OF LOCAL MEAN TIME OF SUNRISE AND SUNSET TO STANDARD MERIDIAN TIME.

Difference of longitude between local and standard meridian.	Reduction to be applied to local mean time.	Difference of longitude between local and standard meridian.	Reduction to be applied to mean local time.	Difference of longitude between local and standard meridian.	Reduction to be applied to mean local time.
° ′ ° ′	*Minutes.*	° ′ ° ′	*Minutes.*	°	*Hours.*
0 00 to 0 07	0	7 23 to 7 37	30	15	1
0 08 to 0 22	1	7 38 to 7 52	31	30	2
0 23 to 0 37	2	7 53 to 8 07	32	45	3
0 38 to 0 52	3	8 08 to 8 22	33	60	4
0 53 to 1 07	4	8 23 to 8 37	34	75	5
1 08 to 1 22	5	8 38 to 8 52	35	90	6
1 23 to 1 37	6	8 53 to 9 07	36	105	7
1 38 to 1 52	7	9 08 to 9 22	37	120	8
1 53 to 2 07	8	9 23 to 9 37	38	135	9
2 08 to 2 22	9	9 38 to 9 52	39	150	10
2 23 to 2 37	10	9 53 to 10 07	40	165	11
2 38 to 2 52	11	10 08 to 10 22	41	180	12
2 53 to 3 07	12	10 23 to 10 37	42		
3 08 to 3 22	13	10 38 to 10 52	43		
3 23 to 3 37	14	10 53 to 11 07	44		
3 38 to 3 52	15	11 08 to 11 22	45		
3 53 to 4 07	16	11 23 to 11 37	46		
4 08 to 4 22	17	11 38 to 11 52	47		
4 23 to 4 37	18	11 53 to 12 07	48		
4 38 to 4 52	19	12 08 to 12 22	49		
4 53 to 5 07	20	12 23 to 12 37	50		
5 08 to 5 22	21	12 38 to 12 52	51		
5 23 to 5 37	22	12 53 to 13 07	52		
5 38 to 5 52	23	13 08 to 13 22	53		
5 53 to 6 07	24	13 23 to 13 37	54		
6 08 to 6 22	25	13 38 to 13 52	55		
6 23 to 6 37	26	13 53 to 14 07	56		
6 38 to 6 52	27	14 08 to 14 22	57		
6 53 to 7 07	28	14 23 to 14 37	58		
7 08 to 7 22	29	14 38 to 14 52	59		

If local meridian is east of standard meridian, subtract from local mean time.

If local meridian is west of standard meridian, add to local mean time.

For differences of longitude less than 15°, use the first part of the table. For greater differences take from the last part of the table the hour corresponding to the nearest tabulated value less than the given difference, and from the first part of the table the minutes corresponding to the remainder obtained by subtracting this tabulated value from the given difference.

INDEX.

This Index gives the maritime States of the United States and Provinces of Canada; the principal countries of the world, important islands and bodies of water, and the 70 ports for which full predictions are given, these ports being printed in small capitals here and also in Table 3.

In order to find any station given in Table 3, find in this Index the name of the country, State, or body of water in or upon which the station is located; the reference will be to the beginning of the list of stations given under that heading, the particular port required appearing in its geographic sequence.

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NOTE.

In the preparation of these tide tables the best available material has been used; but the predictions and tidal constants are necessarily of unequal merit for different parts of the globe, owing to a lack of properly distributed observations upon which to base conclusions.

It is our purpose to substitute better values, as soon as obtained, wherever those given may prove unsatisfactory, and therefore any tidal observations, even if consisting of only a few tides, will be very acceptable.

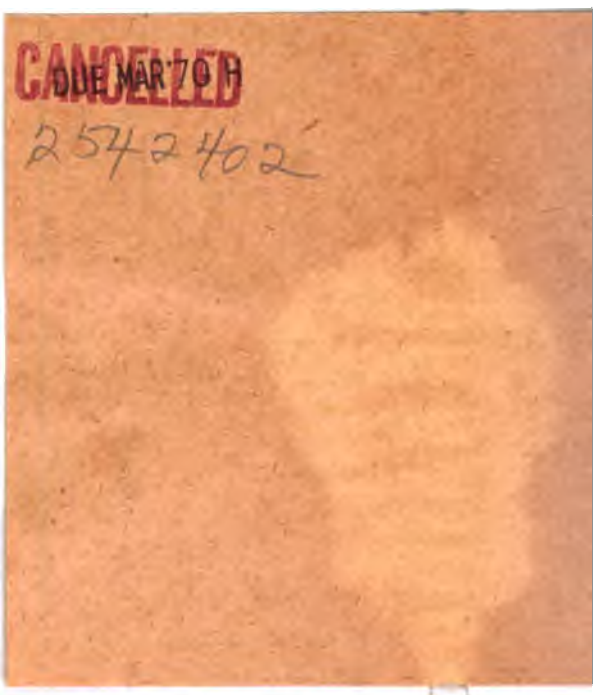
To persons willing to aid in the collection of tidal data, we suggest to observe the height of the sea at regular intervals of one hour, day and night, whenever practicable, rather than the high and low waters only for the same period. Observations taken even at longer intervals of time, such as every two or three hours, will be useful.

It must be borne in mind that these tables aim to give the times and heights of high and low waters, and *not* the times of turning of the current or of slack water. For ocean stations there is usually but little difference between the time of high or low water and the beginning of ebb or flood current; but for places in narrow channels, landlocked harbors, or on tidal rivers the time of slack current may differ by two or three hours from the time of high or low water stand, and local knowledge is required to enable one to make the proper allowance for this delay in the condition of tidal currents.

It is desired to collect information relating to tidal currents with the view of including it in subsequent issues of this publication.

All persons are invited to send information or suggestions for increasing the usefulness of these Tide Tables to the

SUPERINTENDENT OF THE COAST AND GEODETIC SURVEY,
WASHINGTON, D. C., U. S. A.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